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THE VALLEY FARMER,

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ADDRESS, BENJ. BRYAN, PUBLISHER, 97 Chesnut St., Saint Louis, Mo.

LETTER FROM RUSTICUS.

ED. VALLEY FARMER: Here, in the prolific county of Calhoun, Ill. where wood has been the chief article of export, the *cords* of which alone bound the people to the great metropolis of the West; here, where the axe of the unthinking woodsman has shorn the hills of their primeval beauty, thus revealing one of the finest horticultural regions in the Mississippi valley; here, in the humble home of a friend, who worships God (by encouraging fruit culture); here, in a house whose adornments give the most unmistakable evidence that the mechanical genius which conceived them must have been in the last throes of ideality: here it is, that the following ideas run inkily adown my pen.

For many a year have rustic poets sung pæans, in which the farmer and his calling have been exalted, and the measure of many an aspiring man has been filled to the brim with poetical visions, and Arcadian idealities! As for me, I have found the farmer's life to be prosy as the most phlegmatic temperament could possibly desire. If the farmer's boy never sins, nor lifts up his voice in wrath! it is because he never was compelled to drive three yoke of obstinate cattle, while plowing a rocky, stumpy, steep, hill-side—and woe be unto boy ribs, unless they be plow-handle proof! Mountain scenery in a wheat field has lost all the charms that my youthful fancy may ever have pictured. To see some unfortunate neighbor, high in the air, astride of the end of a rail describing the arc of a circle, when a load of unthreshed wheat was overturning on the steep hill-side, was an illustration of aerial navigation that I do not care to witness again! I never did believe it was any fun to tramp and push and crowd away dusty hay, with the thermometer up to 110°, and I in the apex of the hay loft, which was already plethoric with the elongated particles; nor that a combination of barley beards and Canada thistles beneath one's under-garments, in too close proximity to the cuticle, was either human or agreeable! nor that the raking away of chaff from the tail-end of a threshing machine had a Christianizing tendency! In fact I never could discover that there was any poetry in hauling manure for a month or more! I never thought there was much gained by farmers working their boys so hard, that at twenty-one the boys looked as old and as awkward as their fathers did at fifty! or that there was a great deal gained by paying so much attention to breeding good stock, and so little to the physical perfection of our own species! It is well that we were taught to be temperate, yet let us imbibe the *spirit* of the *age* in which we live—even if we be not filled with the spirit of corn! And it is to be hoped that

while rapid progress in the art of war is being made, that the arts of peace will continue to be multiplied, and that the farming community may be found in the advance columns, keeping step to the music of the grand march of the nineteenth century. To accomplish this, activity of mind as well as of body is to be desired. Monthly and weekly agricultural and horticultural journals should be found in every farmer's home. To make them interesting, he should test his ideas in the crucible of decisive experiment, and at once give them to the world through these journals. What the editor and the people want are the facts. No matter if such "interminable highfalutin" phrases as some of those above are not used. What the people want is facts written out in a plain, common-sense style, indicating that the brain from which they originated was backed up by a good country stomach and a healthy digestion! Heart thoughts give promise of being immortal, and facts based on actual experiments will become axioms. It is for this reason that they should be recorded in some good local journal which endeavors to reflect the experimental researches of the men composing the communities in which it circulates. Such a journal is the *Valley Farmer*, and I would suggest to the worthy editor, that, as a worthy son increases the influence of his worthy sire—in a literary point of view a *weekly* agricultural and horticultural journal might be productive of a "*power*" of good.

RUSTICUS.

CHINESE SUGAR CANE.

ED. VALLEY FARMER: Having been engaged for the past three years in the cultivation and manufacture of the Chinese Sugar Cane, we are prepared to give, as a result of our experience, the following statements:

The seed should be planted as early as the season will allow, in a rich, loamy soil, having been well prepared for its reception. High ground is preferable to low, as it will yield better cane, and from which may be produced a superior quality of molasses; while that raised on low, black soil, though of luxuriant growth, contains less of the saccharine properties, and the molasses manufactured from it is mostly of a dark red color.

The cane should be stripped, or bladed, eight or ten days before cutting, and when cut should be worked up immediately, or secured from the weather. It should never be allowed to freeze.

We use Cooper's Union Mill and Durfey's Improved Saccharine Evaporator; and, with our present facilities, we are able to produce from 75 to 80 gallons of molasses per day.

The process through which the juice passes after leaving the mill is as follows: It is conveyed into the evaporator, through which it passes, by means of small openings in the partitions, at the same time being cleansed from all impurities. Thence it is conveyed into the finisher, a second pan with level surface and without partitions, in which the process of evaporation is completed. We find that by using two pans we can not only make much fairer molasses, but the process of manufacturing is greatly increased. The result of our labors last season, on account of the scarcity of cane, was of course but trifling, the aggregate number of gallons amounting to only 196; gallons produced from an acre, 100.

From the above statement it is evident that the planter will realize from one acre of cane $50, providing the molasses will sell at fifty cents per gallon, which it does very readily. We have no doubt but the crop of cane in this vicinity, for the ensuing season, will be comparatively large. And the realization of profits, if the season be favorable, double that of the former year.

We find no difficulty in making sugar from a good quality of cane by boiling the syrup to a proper consistency, when it should be placed in a warm room, where the process of evaporation being imperceptibly carried on, it will granulate, producing very good sugar. Sugar made from the Chinese sugar cane and of our manufacturing, was exhibited at the Hartford Fair last fall.

GEORGE L. GOODRICH.

Centreburg, Ohio, June 13, 1862.

From the Journal of the Ills. State Agr'l. Society.

Essay on the Cultivation of Field Crops and Preparation of Soils.

BY J. B. TURNER, JACKSONVILLE, ILLINOIS.

(Continued from July No.)

The main object of cultivation is, therefore, self-evident. It is to keep the *soil at all times* on the surface, in the best possible condition for the *absorption of heat, moisture and the atmospheric food of plants* from above, and for the free attraction of their *earthy constituents* from the depths below.

In other words, it is to take due and constant advantage of those simple but magnificent provisions which Nature has made, constantly to replenish the earth with the *heat, moisture, gases* and *fluids* indispensable to all vegetable growth, from the sun and the air above, and from the ocean and earth beneath.

This whole process of absorption and attraction resembles in its most material aspects the burning of a lamp, and may well be illustrated by it. In short, it is in itself a great burning of the earth; one part of that great everlasting combustion, by which all the processes of nature are continually carried on.

Now, in the case of the lamp the process is set in motion and carried on by the burning, as we call it, in the air above; that is, the air is constantly circulating around the wick, and

bringing its gases into near and intimate combination with it and the oil it contains, just as it circulates around over the surface of the earth, and by a capillary attraction thus induced, the oil is drawn up from below as the liquids are in the earth by a similar cause. Now, if your lamp-wick is too hard twisted, or too slack twisted, or too coarse in its texture, or too fine and compact, or too much glazed over at the top; or if a wire or tight thread be tied around it below, so as to stop the passage of the oil upward, the burning will be impeded, or the lamp will go out, and the whole process will altogether stop; and neither the burning above, nor the attraction below can go on successfully, except when all parts of the wick that are above the oil are just right; this everybody knows. Now, what the top part of the wick is to the whole lamp and its oil, the plowed surface is to the whole field below, at least so far as all needed purposes of illustration are concerned. With this familiar simile in view, therefore, we can now intelligently search out the main defects in our common modes of plowing and of cultivation.

They all, of course, relate to that upper portion of the field which is actually moved by the plow, and which may be defective either at its upper or under surface, or in its whole interior mass; just as our lamp-wick may be too much glazed at the top, or tied with a tight string at the bottom, or too coarse or hard, or fine and compact throughout: so in our plowing and cultivating, we may leave the upper surface too much glazed, too smooth, or too rough; or the bottom surface too hard and compact; or the whole mass too coarse or too hard, too loose or too fine, too shallow or too deep.

I. *First, the upper surface may be too smooth or too rough.* Where ground has been suffered to lie too long, especially after a heavy rain, in clay soils like those in the West, the surface becomes *glazed* or *crusted* over with a sort of smooth glassy crust, of a considerable lighter color than the same soil is when not so glazed, and sometimes almost of a pale grayish white, even in soils generally quite dark.

Now, this crusting over of the soil, as all well know, interferes at once with the processes of successful growth, but the reason why it does is not generally considered.

But we shall find that it lies in three most vital points; every one of which tends directly and seriously to retard all vegetable growth, especially of such plants as *corn*, and others requiring great heat in the soil.

1. In the first place, this glazed surface being of lighter color, has far less power on that account of absorbing the rays of the sun than it would otherwise have, while the glassy surface constantly, from its smoothness, reflects back the rays like a mirror, and from these combined causes a vast amount of the first element of rapid growth, namely, *heat*, is daily and hourly dissipated, or thrown back into the air and wasted, instead of being absorbed into the soil.

2. In the second place, this smooth surface *excludes the free access* of the *air* to the interior of the soil into which it would from the undulatory or vibratory motion (which I have described) otherwise penetrate, and (by making a constant deposit of dew among its loose particles, both by night and by day, together with the ammonia and carbon, or whatever else it contributes to vegetation,) thus perform its proper functions toward growth, all of which by this little crust are more or less interrupted.

3. But by thus shutting out the free access of both heat and air from above, the corresponding interplay of capillary attraction from below, is also interrupted; just as when the lamp-wick becomes glazed over, the lamp not only ceases to burn brightly above, but the oil, in like manner also ceases to respond, and to run up from below, so that by this simple glazing of the surface of the soil, every one of the three great essentials of each of these circulatory systems, and of all successful growth is at once checked or retarded and the entire root of the plant becomes robbed of every one of its elements of life, namely, the heat of the sun, and the gases and moisture which supply its growth from the atmosphere above, and the capillary attraction which supplies, when needed, its moisture and all other needed elements from below; the mischief is therefore vital at every point, and its real effects any one can see by simply keeping this crust broken every day with a hoe, on one row of cabbages or other plants in a garden, and allowing another to stand glazed over week after week.

For the same reason it is injurious to ground to lie in the sun thus glazed over, whether there is any crop on it or not—that is, it will grow no better; it gains nothing, or but little, either from above or below, whereas, if the surface was roughened with a harrow, or even covered with boards or with weeds, alive or dead, so that it need not crust over, it would be constantly enriching itself, both from what it received from the air above and from the sub-soil below. Hence, when a long drouth succeeds a heavy rain, naked fallow plowing may do more hurt than good; that is, the soil may not gain as

much, either from above or below, when so crusted over, as it would have done if it had been let alone, and not fallow plowed at all. The proper remedy, of course, in all such cases alike, is simply to break up this crust as often as it appears, either with a hoe or harrow or cultivator, or whatever is convenient. In other words, if your agricultural lamp-wick gets glazed over, the only thing is to SNUFF IT—with your fingers, or whatever you can get hold of—for it cannot burn clear again till you do: unless indeed Providence should see fit to undertake to do your own proper work for you, and send along a thunder storm to snuff it for you, which He will not always do in season, for it is not His business to snuff your candles or hoe your cabbages for you, though He may possibly do it. Better do it yourself. Attend to your business, and He will attend to His first-rate—be assured of that; and on ground liable to crust or glaze over, it is your business to plow and stir OFTEN, even though it may not be very deep, and some seasons much oftener than others; and the man who has concluded to cultivate just so many times every year and no more, let the weather be what it will, ought also to conclude to wear just so many jackets every day, summer and winter.

4. But, on the opposite extreme, the upper surface may be too ROUGH. In this case there is the same or even a greater loss of heat, especially in the spring, than before, while all the other processes are interrupted from an opposite cause. The sun's rays are caught in great clods by day, blown away at night, while the interior heat of the earth is fearfully wasted by the more rapid radiation from the rough uneven surfaces. All are aware how the light snow will melt sometimes from a smooth or rolled field in a single day, while it remains for weeks on an adjacent uneven or cloddy field. This shows us how much heat is wasted by leaving the field rough and full of clods, in the spring months, which would otherwise be absorbed into the soil and laid up to push the young corn into an early maturity of growth. For the best manure heap any corn raiser has is the SUN, the next best the AIR with its GASES, and the rest he may find in his field below, or in his farm-yard, or wherever he pleases; but if he so cultivates as to constantly waste the power of the SUN and the AIR, he cannot raise a first-rate crop of corn, manure it as he will. Since our spring climate usually has too little heat for corn and too much for wheat, we should keep CORN surfaces smooth, so as to save as much heat as possible, and WHEAT surfaces rough or rigid, so as to avoid it as much as possible. So, in all cases, we save heat by smooth surfaces, if they are not glazed or glassy—and dissipate it rapidly by rough ones; both that which comes from the sun above and from the centre of the earth below. Water also stands and lodges upon rough cloddy surfaces, and thus again dissipates, in its evaporation, an immense amount of this vital element of the corn crop, for it wastes the same amount of heat to boil away or evaporate a quart of water in the field that it does in a kettle over the fire. Such rough surfaces also retard the deposit of moisture and gases from the air above, and to the same extent interfere with the capillary attraction from below, much as too much frizzling the top of the lamp-wick arrests all its proper modes of burning. The free and proper access of the air to the soil below is everywhere interrupted by dry clods and inequalities, which it cannot penetrate, or if so only to have its deposits blown away again by the winds; and, while the natural action is thus interfered with at the surface, that from below must be correspondingly impeded, and the whole process, either of recuperation or growth in like manner retarded.

[To be continued.]

Cook's Evaporator.

We have read the proceedings of the State Sorghum Conventions held in Ulinois and Ohio in January, and in Michigan in April, with much interest. Large premiums were offered for the best samples of Sugar, and a large number of very fine samples were exhibited, taken from lots of sugar varying in weight from 100 lbs. to 2,000 lbs. each. The gentleman who took the premium in Illinois, had made a *ton* of Sugar.

It is rather remarkable that out of the large number of Evaporators before the public, the entire credit of the Sugar display at these Conventions is due the COOK EVAPORATOR, manufactured by BLYMYERS, BATES & DAY, Mansfield, O. The premiums, amounting to $255, were all taken by men who used this Evaporator. The claim of the manufacturers that it was the *only one* which could make Sorgho Sugar successfully, was apparently so extravagant that we paid it no attention; but these exhibitions and the failure of the other Evaporators to come forward with Sugar, seems to establish it fully.—[*Marysville, (O.) Tribune.*

HOW TO HAVE GOOD CIDER.

A correspondent of the Boston *Journal*, says: "Put the new cider in clean casks or barrels, and allow it to ferment from one to three weeks, according as the weather is cool or warm. When it has attained to lively fermentation, add to each gallon three-fourths of a pound of white sugar, and let the whole ferment again until it possesses nearly the brisk pleasant taste which it is desirable should be permanent. Pour out a quart of the cider, and mix with it one quarter of an ounce of sulphite of lime for every gallon the cask contains. Stir until it is intimately mixed, and pour the emulsion into the liquid. Agitate the contents of the cask thoroughly for a few minutes, then let it rest that the cider may settle. Fermentation will be arrested at once, and will not be resumed. It may be bottled in the course of a few weeks, or it may be allowed to remain in the cask and used on draught. If bottled it will become a sparkling cider, better than what is called champagne wine. Professor Horsford, of Cambridge, was the first to use the sulphite of lime for this purpose, and to him is due the credit of first calling attention to its usefulness. It is in no respect deleterious, as the sulphite, into which the sulphate is changed by the liberation of sulphurous acid, is entirely insoluble, and remains at the bottom of the vessel. The writer has cider prepared in this way two years since, which has remained unchanged, and is now a beverage of unsurpassed excellence. The sul*phite* of lime, not the sul*phates*, must be used."

The above-described plan for preventing the fermentation of cider, we have no doubt, is a good one; but the reactions described by our cotemporary are not such as actually occur. It is not the sulphate that is converted into the sulphite, but the reverse.

The sulphite of lime is a combination of sulphurous acid and lime, while sulphuric acid and lime combine to form the sulphate of lime. Sulphurous acid is a combination of one equivalent of sulphur with two of oxygen (S O 2), and it has an intense affinity for oxygen, readily combining with one more equivalent to form sulphuric acid (S O 3). The fermentation of wine is the process of combination by the atoms of wine with oxygen; but as oxygen—unlike some gentlemen of our acquaintance—prefers sulphurous acid to wine, when sulphurous acid is present in the cask, the oxygen combines with it instead of with the wine, and thus the fermentation is arrested. Wine makers are in the practice of burning a little sulphur in the casks to check the fermentation.

Sulphite of lime put into cider has the same effect; and from the same property of sulphurous acid. This acid combines with the oxygen in the cask, becoming sulphuric acid and forming the sulphate of lime.—[*Scientific American.*

Usefulness of Charcoal in Agriculture.

In reply to several inquiries, we say that charcoal is useful. Whether it acts directly and specifically as a manure, to any perceptible degree, may perhaps be questioned. Whether it decomposes at all may well be doubted: but it acts as an excellent absorbent of gases and liquids, and so contributes indirectly to the fertility of the soil. Even sparingly used, it increases the warmth of land, darkening its color. When prepared in the old-fashioned way—piling together twenty or thirty cords of hard wood, and covering it with sods, etc.—we get not only good coal, but also in the sweepings, refuse coal, and dirt around an old pit, a good deal of potash, soda, lime, and some phosphorus. Besides the effect of charcoal and ashes, we have also that of "torrified" or baked earth which is often of considerable importance. Every experienced florist will tell us of the fine effect produced by it when spread in coarse lumps on the surface of his pot soil. Who has not observed how charcoal dust gives the grass of lawns a dark, rich lustre? An acquaintance of ours who frequently burns coal for market, collects the refuse dust and ashes from his hearths, and mixing it with common soil, about a half and half, spreads the same over his grass and wheat fields at the rate of about five cords to the acre. The effect, he assures us, is quite marked. The superior green of his fields so treated, is noticeable to every passer by. Another farmer uses the leavings of his "coal-hearths" for mixing with manure in his stables, and as a deodorizer in drains, privy-vaults, etc. This compost he uses on corn, potatoes, and cabbages, and where it is used, he has no trouble with worms of any kind, and his crops are large and of the first quality. Cases are not uncommon where charcoal dust is thrown into hog-pens, and in other ways incorporated with offensive manure, uniformly deodorizing the manure, to some degree at least.

In an old garden, once under the writer's care, worms and vermin of various sorts infested the ground. It was almost impossible to raise crops of radishes, beets, onions and cabbages. Lime and salt were tried, but with little apparent benefit. At length we spread a coating of

charcoal dust and salt over the entire surface, and worked the mixture in thoroughly. From that day to this, the worms have diminished, and now are few and far between—killed or driven away by the treatment, we know not which. Another year, we mean to use the same composition under our currants and gooseberries, to see if it will not kill out the moths; and around our young fruit trees to drive away the borers. For young evergreens, and all trees, we presume charcoal dust would prove an excellent dressing.—[*American Agriculturist.*

Crops in Franklin Co., Mo.—Cut Worm.

Ed. Valley Farmer: Being a subscriber to your paper, I assume the privilege of giving you some information as to our prospects in this region. The crop of wheat, which is ¼ larger than ever sown in this township, is now harvested, and the yield is good, with a full plump grain; and those who sowed clover on wheat, have a beautiful stand.

Grass is a crop which has been very much neglected in this county heretofore; but for several years past the attention of the farmer has been gradually drawn in that direction, as the most substantial and reliable feed for all kinds of stock, which, in connection with the demand to supply the Government, has been the means of inducing nearly every farmer to grow Timothy, and the result is entirely satisfactory and remunerative.

Owing to the advance in the price of tobacco, there has been a very extensive crop planted this season; many farms on which it never grew before, and many others that have not grown it for years, are now green with a flourishing crop of tobacco, and the owners look forward with the expectation of being much relieved from pecuniary embarrassment by the proceeds of the growing crop. Many who were much embarrassed have been relieved by the sales of their tobacco this season, and now all seem to have almost forgotten that there is war raging in the land, and are using increased energy and exertion to meet the exigency of these hard times by cultivating the soil.

But we have an enemy, of which I wish to speak, in the shape of a worm, which much resembles, and probably is, what is commonly called the grub worm. It is most troublesome in the black loams of the Missouri River Bottoms, and feeds on the roots of corn. Last year was the first time extensive depredations were witnessed in this township, and many supposed that winter plowing would destroy them, and tried the experiment with no effect. One of my neighbors has a field of some 30 acres, ½ in the centre being in wheat this season, and near ¼ on each end in corn, ¾ of which throughout both pieces of corn have been much injured by the worm. One piece of corn ground was in wheat last season, and was fallowed in the fall and winter, and the other was in corn and was not fallowed until this spring. The worm is now equally destructive in each piece, the roots being eaten up. The corn appears all right early in the morning, but when the sun gets warm the blades twist and roll up very much, and the first wind blows the corn down. Now if you know how we are to prepare the land for the reception of the crop next season, please inform us through your journal. Yours respectfully,

W. B. Smith.

Franklin Co., Mo., July 9th, 1862.

A CHEAP ICE HOUSE.

I saw in the *Farmer* of Nov. 21st, a plan for an Ice Stack which may be a good one, but with your permission I will lay before your readers a plan for an Ice House, which, for availability, cheapness and utility is probably hard to excel. I have tested it two years and found it to work like a charm.

In the first place I selected a piece of ground with a slope of one foot per rod, under the shade of a jack oak grove; procured 45 rails 12 feet 6 inches long, then built a four-square pen four rails high, and filled it 15 inches deep with saw-dust. Then made a straight edge 12 feet long with a transverse piece on each end of it three feet long; took one handle off a cross-cut saw, then took a one-half inch rod of iron and turned a right angle hook six inches long on one end, cut it four feet long and turned a ring as a hold for the hand on the other end, took a brace and five-eighths bit, a stout plank, two hands, and a team and a sleigh, and went half a mile to a pond—took my fixtures and marked the ice off into squares of three feet; with my saw, with one handle off, sawed out the squares, and bored a hole near one edge of the blocks with the bit, and with my hook raised one edge of the block a few inches, slipped the plank under, gave a steady pull, and the cake was on the sleigh in a "jiffy."

Thus we continued, until we loaded nine blocks ten inches thick. I then built a pyramid of ice, 9 feet square in the rail pen, leaving 18 inches of space between the ice and wall; this

space I filled up with saw-dust well packed in, and put dust 10 inches thick over the ice. My stack of ice was nine feet square and seven feet high. In order to keep the saw-dust from sifting out at the crevices it will be necessary to use a little straw about it. I then, after building up my pen, covered with sheathing boards—the work was done.

I have tried the above plan two years, and saved plenty of ice until ice was frozen the fall afterwards—indeed we have plenty in the pen now, Dec. 2d, put up last January.

It will be necessary to give it some attention through the spring, and keep the dust packed well up to it at the sides.

My ice has kept so well that there has not been waste enough from it to moisten the ground around the pen, though I have used the walls of dust two years without renewal. I last winter cleared out the bottom of the pen and let the ground freeze hard, and put in new dust below and on top of the ice. Farmers, try it, and you will continue it, doubtless. Ice is so delightful in summer, and two hands will fill a pen in two days.—[P. K. Honn, *in Prairie Farmer.*

The Agricultural College Act.

An act donating Public Lands to the several States and Territories which may provide Colleges for the benefit of Agricultural and the Mechanic Arts.

Be it enacted by the Senate and House of Representatives af the United States of America in Congress assembled, That there be granted to the several States, for the purposes hereinafter mentioned, an amount of public land, to be apportioned to each State, in quantity equal to 30,000 acres, for each Senator and Representative in Congress to which the States are respectively entitled by the apportionment under the census of 1860: Provided, That no Mineral lands shall be selected or purchased under the provisions of this act.

Sec. 2. And be it further enacted, That the land aforesaid, after being surveyed, shall be apportioned to the several States in sections or sub-divisions of sections not less than one quarter of a section; and wherever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said State shall be entitled, shall be selected from such lands within the limits of such State, and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public lands subject to sale at private entry at one dollar and twenty-five cents per acre to which said State may be entitled under the provisions of this act, land scrip to the amount in acres for the deficiency of its distributive share; said scrips to be sold by said States, and the proceeds thereof applied to the uses and purposes prescribed in this act, and for no other use or purpose whatsoever: Provided, That in no case, shall any State, to which land scrip may thus be issued, be allowed to locate the same within the limits of any other State, or of any Territories of the United States, but their assignees may thus locate said land scrip upon any of the unappropriated lands of the United States subject to sale at private entry at one dollar and twenty-five cents an acre. And provided further, That not more than one million acres shall be located by such assignees in any one of the States. And provided further, That no such location shall be made before one year from the passage of this act.

Sec 3. And be it further enacted, That all the expenses of management and superintendence and taxes from date of selection of said lands, previous to their sale, and all expenses incurred in the management and disbursement of the moneys which may be received therefrom, shall be paid by the States to which they may belong out of the treasury of said States, so that the entire proceeds of the sale of said lands shall be applied, without any diminution whatever, to the purposes hereinafter mentioned.

Sec. 4. And be it further enacted, That all moneys derived from the sale of lands aforesaid by the States to which the lands are appointed, and from the sales of land scrip hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or some other safe stocks, yielding not less than five per cent. upon the par value of said stocks, and that the money so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in section fifth of this act), and the interest of which shall be inviolably appropriated by each State, which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college, where the leading object shall be (without excluding other scientific and classical studies, and including military tactics) to teach such branches of learning as are related to Agriculture and the Mechanic Arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.

Sec. 5. And be it further enacted, That the grant of land and scrip hereby authorized, shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts:

First: If any portion of the fund invested, as provided for by the foregoing section, or any portion of the interest thereon, shall, by any action or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall remain forever undiminished; and the annual interest shall be regularly applied without diminution to the purposes mentioned in the fourth section of this act, except that a sum, not exceeding ten per centum upon the amount received by any State under the provisions of this act, may be expended for the purchase of lands

for sites or experimental farms, whenever authorized by the respective legislatures of said States.

Second: No portion of said fund, nor the interest thereon, shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings.

Third: Any State which may take and claim the benefit of the provisions of this act, shall provide, within five years, at least, not less than one college, as prescribed in the fourth section of this act, or the grant to such State shall cease; and said State shall be bound to pay the United States the amount received of any lands previously sold, and that the title to purchasers under the State shall be valid.

Fourth: An annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their costs and results, and such other matters, including State industrial and economical statistics, as may be supposed useful; one copy of which shall be transmitted by mail free, by each, to all the other colleges which may be endowed under the provisions of this act, and also one copy to the Secretary of the Interior.

Fifth: When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they shall be computed to the State at *the maximum price, and the number of acres proportionally diminished.*

Sixth: No State, while in a condition of rebellion or insurrection against the Government of the United States, shall be entitled to the benefits of this act.

Seventh: No State shall be entitled to the benefits of this act, unless it shall express its acceptance thereof by its legislature within two years from the date of its approval by the President.

Sec. 6. And be it further enacted, That land scrip issued under the provisions of this act, shall not be subject to location until after the first day of January, 1863.

Sec. 7. And be it further enacted, That land officers shall receive the same fees for locating land scrip issued under the provisions of this act, as is now allowed for the location of military bounty land warrants under existing laws: *Provided*, That maximum compensation shall not be thereby increased.

Sec. 8. And be it further enacted, That the Governors of the several States to which scrip shall be issued under this act, shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds.

Potator Rot.—I have remarked it, and heard it remarked, that cutting the vines of potatoes at the first symptoms of rot, checks the disease. A still more effectual way, says a recent account, is to pull up the vines, keeping the potatoes in the hill by pressing the ground with your foot.

[Written for the Valley Farmer.]

Farmers' Club of St. Charles, Mo.

July 5th, 1862—*Regular Monthly Meeting.*—Being now in the midst of harvest—adjourned to meet at the office of J. A. Dick, in the city of St. Charles, on Saturday, the 12th inst. at 3 o'clock P. M.

July 12th, 1862.—Met according to adjournment. Minutes of last monthly meeting read and approved. J. J. Johns, Esq. in the chair. Messrs. S. S. Watson, R. H. Overall, and R. H. Parks, Esq., were proposed and elected members of the Club.

Yellow Dock.—Members who experimented with Yellow Dock last month, found that by cutting it off at the surface of the ground, or putting upon it a teaspoonful of salt, killed it in every instance. This remedy is most valuable where the ground is too hard to prize it out with a spud or spade. In soft ground, as in meadows during wet weather, a cheaper and more expeditious method is to take a spade, or spud, 2½ or 3 inches wide, put down well at the side of the dock, and prize with one hand, and with the other draw the dock out by the roots—this, well executed, makes an end of this noxious weed.

Rabbits on Apple Trees.—The best method of preventing rabbits from peeling the bark off young apple trees is, to take—say before the first snow in November—equal parts of cow-dung and quick-lime; boil them together and make a wash—which, applied to the trees with a swab or brush, is an effectual remedy. It is at the same time beneficial to the trees, as it keeps the bark clean and smooth. It is quicker done than tying up with corn-stalks, and leaves no place for mice to make nests about the roots of the trees. Members of the Society have practiced this method for years past. It is also said to be effectual against sheep *nibbles*—but for this animal it is necessary to apply the wash higher up the body of the tree than for rabbits.

A Bruised Tree.—When the bark of a tree has been knocked off or badly bruised, it is important to know the best application for healing it over. Members have for this purpose used, with great success, a compost made of cow-dung and clay, which must be bound over the wound on the tree.

Questions for next meeting: Pruning—Gophers and Elders.

Adjourned to next regular meeting at the office of J. A. Dick, Esq.

B. A. Alderson, Sec'y.

The Cultivation of Grasses.

It is a common complaint among intelligent farmers, and the fact is verified by statistical returns, that the average yield of meadows as also that of arable lands is less at the present day than it was twelve or fifteen years ago, and some of the more scientific agriculturists have attributed this deterioration to the prevailing ignorance in a great measure among farmers in regard to the nature, uses and relative value in the way of nutriment of the various species of grass. The best grasses even when natural to the soil under culture run out earlier than the coarser and less valuable sorts, and this fact should be constantly borne in mind. Of all the grasses, Timothy is the most nutritive, but upon uplands, for home consumption, the orchard grass will be found most profitable. Lime, potash and the phosphates must be present in the soil in which grasses are grown, and in sufficient quantities to keep the yield year after year up to the highest acreable product; but liquid manure, which contains the fertilizing elements in a soluble state is also of surpassing advantage when properly applied. The true plan in seeding down to grass is to stock the land, not with one sort of seed alone, but with a variety, taking care, however, as far as possible, to sow only the seeds of such grasses as come into flower about the same time. It has been demonstrated that only a certain number of seeds will grow on a given area; that not more than two seeds of blue grass for instance, will grow upon a square inch of ground; whereas by seeding the same space to Timothy, and multiplying the kinds, some five or six different varieties will fill up and mature upon the same space of ground. Of course, all other things being equal, the greater number of plants that can be made to grow and flourish upon a given space the heavier will be the product of hay to the acre.

In preparing the land for grass it is essential that it should be deeply plowed; sub-soiling being of infinite service in increasing the supply of soluble food, and also in guarding the grasses against the deleterious effects of our summer heats and drouths by keeping the soil cool and yielding by evaporation a supply of moisture at a time when it is most needed. A second condition is, that the soil should be reduced before seeding to as fine a tilth as possible. After sowing the seed care must be taken that it shall not be covered to a greater depth than about one-eighth of an inch—for if it be covered to a depth of half an inch very many of the seeds will be lost, and if to one inch they will not germinate at all. The use of the harrow in covering grass seed is very objectionable, but if it must be harrowed in, it should be done very lightly. The best time for sowing grass seed is just before a rain, for if the soil is sufficiently loose, the rain in its action upon the fine particles of soil, will furnish the seed with the necessary covering. In applying lime to grass lands, if the lime is slacked with brine made from refuse salt, its agricultural value will be greatly increased. In seeding down to Timothy not less than a peck of seed should be used, and the fields if made rich, should be suffered to remain in grass for a number of years; taking care to keep the grass in vigor by scarifying the soil in the autumn and by occasional top-dressing of manipulated guano and wood ashes—a hundred and fifty pounds to the acre of the former and from fifteen to twenty bushels of the latter. By pursuing this system and by not pasturing the meadows in the fall of the year, heavy crops of hay may be taken from the lands for many successive seasons.—[*Rural Register.*

SCIENCE OF THE WEATHER.

From a manual recently compiled by Admiral Fitzroy, of England, for the British Board of Trade, we derive the following popular directions "How to observe the weather:"

"A few of the more marked signs of weather, useful alike to the seaman, farmer and gardener, are the following:

Whether clear or cloudy—a rosy sky at sunset presages fine weather; a red sky in the morning bad weather, or much wind, perhaps rain; a gray sky in the morning, fine weather; a high dawn, wind; a low dawn, fair weather.

Soft looking or delicate clouds foretell fine fine weather, with moderate or light breezes; hard-edged, oily looking clouds, wind. A dark, gloomy blue sky, is windy; but a light, bright blue sky indicates fine weather. Generally, the softer clouds look the less wind (but perhaps more rain), may be expected; and the harder, more 'greasy', rolled, tufted or ragged, the stronger the coming wind will prove. Also, a bright yellow sky presages wind; a pale yellow, wet; and thus by the prevalence, of red, yellow or gray tints, the coming weather may be foretold very nearly; indeed, if aided by instruments, almost exactly.

Small, inky-looking clouds foretell rain; light scud clouds driving across heavy masses show wind and rain; but if alone, may indicate wind only.

High upper clouds crossing the sun, moon or stars in a direction different from that of the lower clouds, or the wind then felt below, foretell a change of wind.

After fine, clear weather, the first signs in the sky of a coming change, are usually light streaks, curls, wisps, or mottled patches of white, distant cloud, which increase, and are followed by an overcasting of murky vapor that grows into cloudiness. This appearance, more or less oily or watery, as wind or rain will prevail, is an infallible sign.

Usually the higher and more distant such clouds seem to be, the more gradual, but general, the coming change of weather will prove.

Light, delicate, quiet tints or colors, with soft, undefined forms of clouds, indicate and accompany fine weather; but gaudy and unusual hues, with hard, definitely outlined clouds, foretell rain, and probably strong winds.

Misty clouds, forming or hanging on heights, show wind and coming rain—if they remain, increase or descend. If they rise or disperse, the weather will improve or become fine.

When the sea birds fly out early, and far to seaward, moderate wind and fair weather may be expected; when they hang about the land, or over it, sometimes flying inland, expect a strong wind, with stormy weather. As many creatures besides birds are affected by the approach of rain or wind, such indications should not be slighted by an observer who wishes to foresee weather.

There are other signs of a coming change in the weather, known less generally than may be desirable, and therefore worth notice; such as, when birds of long flight, rooks, swallows or others, hang about home, and fly up and down low, rain or wind may be expected. Also when animals seek sheltered places, instead of spreading over their usual range; when pigs carry straw to their sties; when smoke from chimneys does not ascend readily (or straight upwards during calm), an unfavorable change is probable.

Dew is an indication of fine weather; so is fog. Neither of these two formations occur under an overcast sky, or when there is much wind. One sees fog occasionally rolled away, as it were, by wind—but seldom or never formed while it is blowing.

Remarkable clearness of the atmosphere near the horizon, distant objects, such as hills, unusually visible, or raised (by refraction), and what is called 'a good hearing day,' may be mentioned as among the signs of wet, if not wind, to be expected.

More than usual twinkling of the stars, indistinctness, or apparent multiplication of the moon's horns, halos, 'wind dogs,' and the rainbow, are more or less significant of increasing wind, if not approaching rain, with or without wind."

[Written for the Valley Farmer.]

BONE MANURE.

Save all the bones you can lay hold of. We have already, in another article, told you what to do with them. We will now tell you what more may be done. When you get a quantity together, put them into a kettle, cover with lye; if the weather is cold, warm occasionally for a few days. Then look. You will find all your hard bones a soft, pulpy mass. Here you have precious stuff. Dilute this, and you will have a liquid manure that will produce a growth that is almost a miracle. Add as many buckets of water to one of lye and soft mass of bones as you like: the less water the less labor; or mix it with muck: the muck will be manure. By all means save your bones. If no other way, and you are determined to be careless, plow them under. There is a wealth of manure—of the best quality—in bones and carcasses. F. G.

To Prevent Skippers in Hams.—In a communication to the *Cotton Planter*, Mr. McWillie says: "There is, according to my experience, nothing easier than to avoid the skipper, and all worms and bugs that usually infest, and often destroy so much bacon. It is simply to keep your smoke-house dark, and the moth that deposits the egg will never enter it. For the past twenty-five years I have attended to this, and never had my bacon troubled by any insect. I have now hanging in my smoke-house, hams, one, two and three years old, and the oldest are as free from insects as when first hung up. I am not aware of other causes for the exemption of my bacon from insects, but simply from the fact that my smoke-house is always kept dark. Before adopting this plan, I had tried many experiments, but always without success, or with injury to the flavor of my bacon. I smoke with green hickory. This is important, as the flavor of bacon is often utterly destroyed by smoking it with improper wood."

Sorghum vs. Imphee.—From all that we have been able to learn, we conclude that Sorghum is best for all except warm, sandy soils in warm locations. Imphee is a little longer in maturing, but yields a trifle the most sweet. Further south it will probably prove the best, but our seasons here are none too long for Sorghum, and it should therefore be preferred to Imphee in this State, with, perhaps the exception of growers who have a warm soil and location for it.—[*Michigan Farmer.*

Feeding Oats to Horses.—The same quantity of oats given to a horse produces different effects according to the time they are administered. I have made experiments on my horses, and have always observed there is in the dung a quantity of oats not digested when I purposely gave them water after a feed of oats. There is, then, decidedly a great advantage in giving horses water before corn. There is another bad habit, that of giving corn and hay on their return to the stable after hard work. Being very hungry, they devour it eagerly and do not masticate; the consequence is, it is not so well digested and not nearly so nutritious. When a horse returns from work, perspiring and out of breath, he should be allowed to rest for a time, then giving a little hay, a half an hour afterward water, then oats. By this plan water may be given without risk of cold, as the oats act as a stimulant.—[*Journal d' Agriculture.*

Tanning Skin so as to Retain the Fur.—A correspondent of the *N. E. Farmer* gives the following receipt:

Receipt No. 1.—Take 1 lb. sal soda, 1 oz. copperas, 4 oz. sulphuric acid, dissolve in 2 quarts of warm soft water.

No. 2.—1 gallon lye, 1 oz. sugar of lead, 1 oz. copperas, 1 oz. prussiate of potash, dissolve in 2 gallons soft warm water.

Apply to the flesh side, No 1, from 5 to 10 minutes; No. 2, twice as long, according to the thickness of the skin or pelt.

Prevention of Wood Rotting.—To prevent posts and piles from rotting, says the *American Agriculturist*, the following coating has been recommended, which is the more suitable, since it is economical, impermeable to water, and nearly as hard as stone:—Take 50 parts of rosin, 40 of finely powdered chalk, 300 parts (or less) of fine, white, sharp sand, four parts of linseed oil, one part of native red oxide of copper, and two parts sulphuric acid. First heat the rosin, chalk, sand, and oil, in an iron boiler; then add the oxide, and with care, the acid; stir the composition carefully, and apply the coat while it is hot. If it be not liquid enough, add a little more oil. This coating, when is is cold and dry, forms a varnish which is hard as stone.

Salting Butter.—Butter will keep as well without salt as with it. Salt is a mere matter of taste. No butter will keep with the least milk in it, nor when the grain (vesicles) is broken.

When the fact was ascertained that soil had the power of taking ammonia from water, Prof. Liebig advanced the idea that plants did not take up their food in solution—that the roots possessed the power of taking up matter insoluble in water. But the experiments of Dr. Voelcker show that it is not necessary to assume this, for he found that while a soil absorbed ammonia from water, yet it would afterwards part with this ammonia when a much larger quantity of water was used. It thus appears that soil has the wonderful property of absorbing ammonia from even comparatively weak solutions, and retaining it till a large quantity of water dissolves it out for the use of plants.—[*Genesee Farmer.*

Salt as a Manure.

Some farmers place great dependence upon salt as a manure. A favorite theory with some is, to sow from five to eight bushels to the acre, and harrow it in. On meadows it is said by some to be especially beneficial. Sow broadcast, harrow and roll down. This may be done in the spring or fall, or after the crop is taken off—perhaps the earlier the better, for salt, like lime, requires time to adapt itself to the uses of vegetation. Excess must be avoided, as too much salt will destroy both grass and grain.

Planting Potatoes—One of the best English authorities, Robt. Thomson, gives it as his opinion, after experimenting carefully for many years, that 27 inches between the rows, and 8 inches in the row, is the best distance for planting potatoes. In planting, 5 or 6 inches of ground is the best covering. He says, when planted further apart, potatoes are apt to grow unequal, that is, some too small and some too large, and neither as good as when greater uniformity is given.

Buckwheat as a Grass Killer.—Some farmers will not believe that buckwheat is an exterminator of noxious ingredients of the soil. They say they cannot subdue grass with it. The reason is, they do not cultivate properly. The ground in most cases should be plowed in the spring, and then again a short time before sowing. Then, if the soil is rich, there must of needs be a heavy growth. The roots will pretty much occupy the soil, and the stalks cover the ground. This will exclude the grass and weeds. It will prevent them from growing by being overpowered by the grain, while at the same time there is in buckwheat, it is affirmed, a destructive tendency toward other vegetation. Cultivate your soil then thoroughly, and enrich it, if not rich enough, for a good crop of straw.

[Written for the Valley Farmer.]

VETERINARY DEPARTMENT.

By Geo. H. Dadd, V.S., St. Louis, Mo.

ABORTION IN COWS.

Abortion sometimes prevails in certain localities as an enzootic pest. The husbandmen of France have suffered great losses, so also have the people in various parts of this country.

A few years ago, abortion raged most fearfully in the town of Concord, Mass. Whole herds of cows aborted; this was evidently an epizootic affection, and must have been propagated either by infection or by sympathetic influence, and thus extended from one farm to another.

Sometimes one among a herd of cows will abort, and the others are not thus affected; yet it is unsafe for a farmer to keep such an animal about his premises unless she be spayed, which operation puts a stop to reproduction and makes her a permanent milker.

Epizootic abortion may, however, sometimes owe its origin to the same unknown and mysterious causes which occasion the plague, murrain, and the alarming and fatal maladies which sometimes prevail among cattle in Germany and in the Russian Steppes. Such maladies come and go, and no man knoweth the why nor the wherefore. There is one thing, however, we do know, and which may be taken advantage of to prevent the spread of the malady, and that is, all epidemic and epizootic affections select their victims, and pounce upon those whose vitality is impaired by indiscretions practiced on the sanative laws of life. It has been recorded that when the yellow fever prevailed in New Orleans a few years ago, and made such sad havoc among the members of the human family, two thousand died ere it touched a single *sober* citizen. Showing conclusively that, by temperance and an intelligent regard for the sanitary laws of life, we may prevent to a great extent many diseases and premature deaths both among men and animals; for the latter are governed by the same laws as regards physiology and pathology that we are.

It may be argued that many cows, the subjects of accidental abortion, are usually in very excellent condition. This is true, and perhaps may be the cause of the difficulty. "*Good condition*" in a majority of cases signifies *plethora*, and *plethora* is an abnormal state of the solids and fluids. A great proportion of cases of puerperal fever and inflammatory diseases that have fallen under my care, happened to occur among animals in very excellent condition, abounding in fat. Livery stable horses who have plenty to eat and little to do, accumulate fat and flesh, and are always the first victims to whatever maladies may prevail. The same is true of man—the evils of civilization increase the liability to disease.

Yet after all that may be written on this subject, it is well known that some cows will abort and women will miscarry occasionally, in spite of all precautions to prevent the same. This indicates that there exists in the animal economy some constitutional predisposition, and some errors in diet or management operates as the exciting cause.

I propose now to call the reader's attention to some important matters in view of preventing abortion.

A very objectionable, and I may add ruinous practice, prevails in some establishments of keeping the cows impregnated all the time. The mother no sooner gets through the pains and perils of parturition than she is again compelled to submit to a re-impregnation. This is what I call an excessive use of the organs of reproduction, which must eventually impair their integrity.

The uterus, like other organs of the body, must have periods of rest, or the day of reckoning will surely come.

An excessive use of the organs of reproduction generally impairs their integrity of function, and by sympathy the nutritive organs are also affected; hence, should a cow be kept pregnant all the time, for the unwise purpose of making her yield a constant supply of milk, it ought not to appear strange that she fall off in the quantity of milk; appear unthrifty; be off her feed, and have a glairy discharge from the vagina: these are the symptoms that usually precede abortion.

So soon as the digestive organs become deranged, sufficient chyme and chyle are not elaborated for the obvious wants of the system; in such cases means most likely to prove effectual in keeping the stomach in a healthy condition, should be adopted.

Consider for a moment the immense amount of labor which the digestive organs have to per-

form! They must be almost constantly engaged in preparing (sometimes from inferior food) the elements of nutrition and reproduction; and the function of digestion must not slacken much, else where are sixteen quarts of milk (more or less) to come from? How is the fœtus in utero to be nourished, and the wear and tear of the cow's organism to be provided for, when the stomach is not in working order?

The practice of milking some pregnant cows to within a short period of parturition, is highly injurious; yet some persons with whom I have had conversations on the subject, contend that in some cases it is found almost impossible to "*dry the cow.*" My advice in such cases is to reduce the quantity of both food and water; and a little aperient medicine given occasionally will not harm the animal. This course must necessarily soon lessen the amount of blood in the system, and as the milk is concocted from blood, we shall under such circumstances have a decrease in the quantity of milk secreted. This may not on all occasions succeed in arresting the lacteal secretion, yet it is the best method with which I am acquainted.

Abortion is sometimes attributable to a state of the system known as *anæmia*—debility. In such cases it will be advisable to supply nutritious food, and give small doses of ginger and golden-seal and two tablespoonsful of phosphate of lime per day.

Taking a physiologic view of the subject, I am led to infer that abortion is, in some cases, the work of Nature to rid the world of that which might be a libel on her handiwork. For should the offspring of cows, whose systems have been injured by a too early use of the sexual organs, and that of other parentage laboring under organic disease (malformation and stunted growth), be permitted to live, the fault and defects might be transmitted, and thus the whole race might rapidly deteriorate; but Nature says, "Thus far shalt thou go, and no further."

It is in this way that the laws of destruction and reproduction are nicely and wisely balanced; hence to avoid the former law, the offspring of weak, emaciated, ill-formed, scrofulous, consumptive and otherwise defective animals, should never be used as breeders.

Cows, when pregnant, should be supplied with good, wholesome water. This is a subject of great importance, for the filthy fluid found in some pastures and troughs, and which the thirsty animals are compelled to imbibe, is often the cause of disease and suffering.

Finally, in view of prevention, I would advise husbandmen not to allow their animals to become parents too early; for a too early use of the sexual organs induces stunted growth. It is quite common in some parts of the country to find cows impregnated at the age of two years. This is wrong, and is almost sure to result in some mischief, either to the juvenile mother or her offspring.

Ed. Valley Farmer: Will you please request Dr. Dadd to give us some account of the *causes* and *cure* of *Sweeney:* I find no information in Youatt, and have not access to the Doctor's work. A Subscriber.

Answer by Dr. Dadd.—Sweeney is a condition of the muscles in the region of the shoulder blade, known to physicians as atrophy or wasting of muscular tissue and their fluids. It is often the result of acute rheumatism, but is more frequently occasioned by foot lameness. I shall try to furnish an interesting article on this subject for the September number of the *Valley Farmer.*

What is a Thorough-bred Horse?

In a former article the writer referred to Youatt, and Prof. Low, on what constitutes an English thorough-bred horse. Stonehenge, a highly approved standard author on the horse, and of more recent date than either quoted thus far, devotes a chapter of his large and valuable work to the discussion of the "English thorough-bred horse."

At the time of the Roman invasion of the British Islands, the horse was used there in chariots and as cavalry. But England never became remarkable for her breed of horses until the time of the Stuarts, who paid great attention to the improvement of the horse, and imported several Arab stallions and mares. In the reign of Henry VIII, the want of good horses was so generally felt, that an act was passed forbidding any *entire* horse, older than two years, and less than 15 hands high from being turned out in any common or waste lands within the borders of some 25 counties of England, including also North and South Wales. In other counties, the limit was 14 hands. Small, weedy mares and foals were ordered to be destroyed; and the owners of horses infected with contagious diseases, who turned them out, were fined ten shillings. These were good laws.

Still the deficiency was such, that in the threatened invasion by the Spanish Armada in the time of Elizabeth, only 3,000 horses could be collected for the cavalry. On board the Spanish ships were great numbers of the Andalusian horses, then considered the best in Europe. These being taken possession of by the victorious Admiral, were of great service in improving the horses of England. The invention of coaches, taking place in the reign of good Queen Bess, gave an additional reason for the

raising of large and more powerful horses. Racing had long been established. No sooner was a light cavalry demanded than a double impetus was given to the amusement, and Arabs, Barbs, and Turks were imported in large numbers, for breeding animals for the saddle and turf. This was about the middle of the 17th century.

The Duke of Newcastle, banished in the time of the Commonwealth, occupied himself while at Antwerp in writing a book on the horse. This was between 1650 and 1660. He described the horses of his day as follows. "The Turkish horse stands high, though of unequal shape, being remarkably beautiful and active, with plenty of power and excellent wind, but rarely possesses a good mouth. Much praise is given to the grandeur and carriage of the Neapolitan horses, and, in truth, they are fine animals, those I have seen being large, strong, and full of spirit. I have not only seen several Spanish horses, but several have been in my possession. They are extremely beautiful, and most eligible of any, either to form subjects for the artist, or to carry a monarch, when, surrounded by the pomp and dignity of majesty, he would show himself to his people; for they are neither so intemperate as the Barbs, nor so large as the Neapolitans, but the perfection of both. The Barb possesses superb and high action, is an *excellent trotter* and galloper, and very active when in motion. Although generally not so strong as other breeds, when well chosen, I do not know a more noble horse; and I have read strange accounts of their courage; for example, when so badly wounded that their entrails have portruded, they have carried their riders safe out of danger, with the same spirit with which they entered it, and then dropped dead."

The war horse of that period resembled the Flemish Hanoverian blacks now in England, but of greater parts. Gradually by the introduction of foreign blood, a breed of horses was made, quite celebrated throughout the world for more than a century, for speed, power and beauty, "in all of which qualities," says Stonehenge, from whom the writer has condensed the foregoing sketch of the early history of the horse of England, the "present stock excel their parents on both sides," adding that "much of this excellence is due to the climate and soil favorable to the growth of grasses exactly suited to the delicate stomach of the horse.

But without care and judgment in the selection and breeding of the horse, our ancestors never could have arrived at such extraordinary success; and whether this depends upon chance or pre-conceived theory, nearly equal merit is due, for there is as much credit in seizing facts which upset a theory or prejudice, as in acting upon those that support it. For a century and a half we have carefully preserved the pedigree of our pure bred horses, and for more than a third of that time they have been recorded in the Stud-book by the Messrs. Wetherby. Besides these, we have breeds suited to the various purposes for which horses can be required, viz., hunting, hawking, light and heavy harness work on the road, and agricultural operations." These several varieties must therefore be considered separately; and as the grand *piece de resistence*, the writer will begin with examining the records of the English thorough-bred, commencing with 1750, in his next communication. —[*Boston Cultivator.*

Definitions in Veterinary Science.

Veterinary Surgeons are employed in contributing to the welfare of animals. But half a century ago, the practice of veterinary medicine was in the hands of men unfitted for the office as the barbers of old were to practice human surgery, and yet when persons who place their lives in such jeopardy, as we behold numbers doing, by employing empirics, we cannot wonder at the hold ignorant pretenders have on the veterinary art. The immediate object of veterinary medical science is disease, and the animal we most regard is the horse; when deprived of his services by disease, our anxiety to restore him to usefulness is only exceeded by endeavoring to raise our fellow being from a bed of sickness.

A definition of disease has proved a perplexing task. We will suppose disease to be a state in which the functions are disordered. In animals disease presents itself to us in two forms, either as sickness or lameness. When a sick or lame horse is brought to us, our first inquiry is directed to the discovery of the seat or situation of the ailment. This proves an investigation too often embarrassing to the veterinary surgeon. The speechless animal, by signs alone, can make known its complaints, and on our observation of these, and on the correctness of the influence we deduce from them, must depend our insight into the seat of the malady.

Having formed our opinions on its seat, we proceed to investigate the nature of the disease. Now the powers that control those actions, whose combination constitute all we know of life, are the same that operate to the production of diseases. So long as their functions are executed with their accustomed regularity, we say the animal is in health. But whenever any manifest disturbance happens, we say that disease is present. The same power that built up the body is continually renewing every part, and furnishes all the secretions. How they effect all this is to us a mystery. We must, therefore, be content with observing the operation of diseases as they present themselves to our notice, and with noting the consequence to which they give rise, in order that we may be advised of their tendencies, and regulate our remedial measures to ameliorate them.

The practical study of disease is to be conducted in the stable. There alone can the book of nature be consulted; clinical observation, as this practical study is called, can not be too much insisted on; through it we learn the changes that take place during life, and the account thus began, is after death completed by an examination into alteration.

In this manner we obtain a knowledge, first of the signs by which the presence of the disease is indicated; second into its history; third into its causes; fourth, we watch its course; fifth, we note its termination. The signs or

symptoms of disease are the circumstances denoting its existence. We collect them from observation. All symptoms are referable to two general heads, to alteration, either in the structure of the part affected, or in its functions. In a part whose situation in the body is superficial, all physical changes are readily noted; such as swelling or shrinking of the part; hardness or softness; warmth or coldness; change of color, &c. But when it is a deep seated part that is ailing, we no longer avail ourselves of this class of symptoms, and therefore we have recourse to those which spring from deranged function.

The earliest symptoms of disease in the horse are in a general way loathing his food. Being called to the animal we inquire into his spirits, and are told that he has lost much of his usual liveliness; there is a depressed countenance, and drooping of the eye. We feel his pulse and find it beating with increased celerity, the body has lost its natural warmth, the coat stares, legs cold; with such symptoms, we may rest assured that disease has commenced, but the precise nature of the disorder it is commonly not in our power to determine. It becomes our duty however to act, and to do so without delay to the best of our judgment.

The state of the pulse is highly important in almost all diseases; it gives to the fingers when applied certain definite sensations by which the state of the general system may to a certain extent be known. 1st, the hardness of the artery; 2nd, its fullness; 3d, its suddenness or abruptness; 4th, the quickness of each beat; 5th, their rapidity or frequency; 6th, their variableness; 7th, their intermittent quality.

The hardness or resistance or incompressibility of the pulse, indicates great force of heart, driving on the blood so as to distend the coats of the arteries. This quality of pulse we depend upon as indicating strength of the system, and requiring venesection; on the contrary, if it is easily compressible, the use of stimulii is generally necessary.

The suddenness or abruptness of the beat, indicates the use of debilitating plans, the quicker pulse or the short time in which each contraction of the heart is performed, is found both in weak and strong states of the system. In the last moments of life the pulse is almost always quick, and in the higher states of excitement and the strongest inflammatory diseases, but the difference of the quantity or mass of blood sent into the arteries determines the comparative strength of the system in these cases.

Rapidity of the pulse occurs in all excessively debilitated cases, or in those which are considered as dangerous.

The variableness of the pulse regards its change of a longer or shorter duration. This state occurs when the system has begun to be weakened after an attack of violent disease.

An intermittent pulse shows some defect in the heart.

All these states of the pulse show the degree of power of the heart, and very generally of the whole system, as the healthy state of the body mainly depends upon the transmission through all its parts of a certain quantity of blood with a certain force and quickness.

The state of the respiration, the heaving of the flanks, is very important in diseases of the horse. There are few diseases in which the respiration remains undisturbed; in some it forms a primary and leading symptom.

Pain is a symptom of most diseases—one that originates in impression upon the nerves distributed over the body.

But speechless as the horse is, it points out the seat of the disease with a sagacity hardly to be credited by persons who are strangers to its habits. For example, the drooping eye in several chronic disorders; the looking back at the flanks in lung fever; the vividness of the glance in the colic, together with the frenzied roll in delirium, are so many examples not to be misunderstood by the practitioner.

Symptoms in fever are rigorously followed by increased heat of skin, quick pulse, languor and lassitude. The essential character of fever is not characterized by any one, but depends upon the co-existence of many symptoms. The exciting causes of fever, whatever it may be, produces an irregular action in the system of nutrition, which is soon conveyed to the rest of the system, owing to the extensive sympathy which exists between every part of the body; and it is probable that all those local inflammations and congestions, are the consequence rather than the cause of this disordered condition of the system.—[*Field Notes.*

THE TIME TO TRAIN COLTS.

Great diversity of opinion exists among intelligent horsemen as to the best age at which to commence the training of colts. Some are of opinion that they should not be driven in harness, or very much used, until from three to five years old; while others, of equal experience and intelligence, contend that their training should commence almost with their very existence, and like children their education should begin in their infancy, and that when judiciously and carefully performed no damage will accrue from the training of these animals, however young. A colt should not be required to perform the work of a fully matured horse, any more than a boy should be expected to do that of a man. When used according to their age and strength it will be a benefit in growth and development of muscle, rather than an injury. If the training is carelessly and injudiciously performed, the animal may be injured at any age, however mature. All this is undoubtedly true, and at this day no humane breeder of these intelligent and noble animals will suffer a two-legged brute to have the care, management, training or using of his horse-flesh. How often have we seen brutes, bearing the semblance and claiming the attributes of men, exhibit in the use of horses, and especially green young ones, less intelli-

gence and feeling than the brutes they undertook to train, or "break," as they call it, and wished that the two could be made to change places.

Thanks to Rarey and to the progress of the age in which we live, extreme cruelty to animals, and especially to the noble horse, is more surely punished at this day than many other offences against the peace and dignity of the State, made penal by the statute; and scenes of this kind are but seldom witnessed, yet the cruel disposition still remains in some men who should never have the care or management of animals of a really higher order of intelligence than themselves. Some writer has said that there is no surer index of the degree of education and refinement of a people or nation than the treatment of their horses. This is in a sense true, but we Americans would hardly be willing to have our education and refinement measured by that rule, since we should suffer greatly in comparison with the wandering Arabs of the desert, who are proverbial all over the world for their noble horses and their attachment and kindness to them, suffering thirst and hunger themselves rather than deprive their animals of needed food or drink. They will part with everything else dear to them—gold, and even life itself—rather than with a favorite mare.

Our attention has been drawn to this subject of training or educating colts by a communication from J. F. French, in the *New England Farmer*, containing much good sense, from which we extract the following, since it is a subject of great importance to breeders of horses:

"I have two colts, one eight months old, and the other one year and eight months. They are both accustomed to the harness. The oldest I have frequently used in the sleigh. On one occasion this winter, when the sleighing was good, it has taken me, together with my little son, to Portsmouth and back, a distance of nine miles, each way, with no inconvenience or injury whatever. Some persons who knew the age of the colt, and the distance it traveled, remarked to me, 'You will kill that colt.'

"This remark induced me to write this short article. Without knowing the circumstances, the reader, perhaps, would form a similar judgment—but the colt is large of its age, in good condition as to flesh, and high-spirited; and I required it to walk at least two-thirds of the distance each way. It was well fed in the city, taken through streets where it could hear various sounds, and witness all sorts of objects—still it was not suffered to tire, or scarcely to sweat at all, and to every appearance was as lively and bright when I reached home as when I started. To have forced it beyond its strength that distance, or half the distance, would have been injurious—but careful training is always beneficial, and we rarely begin too young with anything.

"Lambert Maynard, Esq., of Bradford, Mass., the owner of one of the finest stallions in New England (Trotting Childers), who has had much experience in raising and training colts, and who has sold some fine colts of his own raising at a high figure, informs me that his colts are all broken to the harness before they are a year old, or as he more properly expressed it, educated. He rarely, if ever, uses a whip. As to its injuring them to use them too young, he remarked that he never exercised them so hard as they exercise themselves when alone."

We know of many other breeders who practice driving their colts carefully and moderately the winter before they are one year old, and believe it a benefit to them.

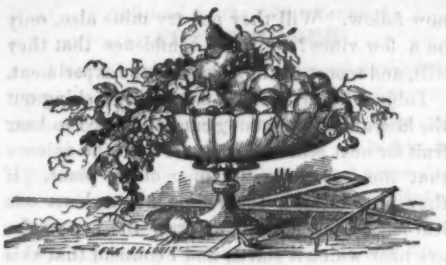
[We take the above from the *Stock Journal*, but fear its publication will do more harm than good, for, while we admit the correctness of the practice of training colts early by very careful, prudent men, yet nine men out of ten will lack discretion and overtax the strength of their colts, and injure them for life—destroying their spirit and powers of endurance. As a general rule we had better wait till the colt is three years old before attempting to break it, and then with kindness it will be an easy task].—*Ed. V. F.*

[Written for the Valley Farmer.]

CARE OF SHEEP.

It is proved beyond controversy that wool, with proper care of the sheep, will improve from year to year, both in quantity and quality; but care must be taken. A friend just came in and said, "Another sheep gone. This makes three out of eleven." And I might add the other eight are ready to follow. And all this for want of attention. The sheep were sheared, and put out to pasture on a bleak hill, without protection. A cold rain ensued which lasted for days. The sheep were chilled; cold and death ensued—for a sheep, like any other animal, is subject to taking cold. This must be guarded against. A humane man, if he is also intelligent, and has withal an eye to the pocket, will see that not only suffering is avoided, but all danger. He will see that his naked sheep are sheltered, as you, as everybody, would want to be. Suffering of any kind will always hurt a sheep—will hurt its quality of wool, and its quantity: two important things to the wool-grower.

F. G.



HORTICULTURAL.

THE MAY BUG.

Ed. Valley Farmer: The beetle you sent me about seven-eighths of an inch long, very dark mahogany brown above, and pale brown beneath, is the *Lachnosterna quercina* of Kuoch, commonly known both in the Eastern and Western States as the May Bug. You say "they fly round in swarms of an evening and devour the young leaves of the oak, the leaves of your climbing rose-bushes, mountain-ash, &c." They often attack fruit trees also, especially cherry trees, and when they are sufficiently numerous injure the trees very materially. They are common everywhere; but there are several other beetles which resemble them very closely, and may easily be mistaken for them—especially a dung-feeding beetle, the *Ligyrus relictus* of Say, which has the same habit of flying in the evening, but is distinguishable by its feet (*tarsi*) being no longer than usual, whereas the May Bug has feet of unusual length.

Although most orchardists and gardeners know the May Bug to their cost in the perfect or winged state, yet few are aware that the notorious White Grub which did so much damage in 1861, by devouring the roots of tame grass, so that the turf in many places would peel off like a door-mat, is the very same insect in its imperfect or larva state. These larvæ occur in small numbers in almost every garden, and are often turned up by the spade. My method with them is to take hold of the head with one hand and the tail with the other, and pull till the tail *secedes* from the head—a kind of practical demonstration of the results of disunion doctrines. The grub I refer to is white, with a reddish brown horny head and six legs—generally curls up in the form of a C—and is about the size, when full grown, of the little finger of a boy of ten years old.

Every farmer knows that it takes ten or twelve times as much fodder to raise an ox from the calf, as it does to feed the same on for a few months after he is raised. Just in the same way I have no doubt that the damage done by these and other underground grubs is ten or twelve times as great as the damage done by them after they have arrived at maturity. But "out of sight, out of mind:" we see the latter, but we do not see the former. Many a florist gets blamed for the withering away of some choice exotic transplanted into the garden of the amateur, when in reality it is the grub, and not the florist, that is to blame for the mischief. I know by my own personal experience, when I was carrying on a farm in Henry Co. Ill., that they will "cut" corn as well as the Wire Worm (which is the larva of a click-beetle) and the true Cut Worm (which is the larva of a moth or miller).

There is no known remedy for the depredations of the May Bug but to place sheets under the trees attacked by them, and shake them off early in the morning. Those who have tried the experiment say that in four or five days they have completely cleared their trees. As to the White Grub it is asserted, and I think the assertion a very probable one, that by rolling meadows where they are abundant with a very heavy roller, the grubs are squashed and destroyed.

Benj. D. Walsh.

Rock Island, Ill., May 29, 1862.

[Written for the Valley Farmer.]

THE EARLY HARVEST APPLE.

Spending a day or two in the orchard amongst my thirty trees of this apple, has set me to thinking upon it, and thinking prompts a short essay on the character of this peculiar fruit and my own experience with it.

"An American apple," says Downing; "and taking into account its beauty, its excellent qualities for the dessert and for cooking, and its productiveness, we think it the finest early apple yet known."

Looking over the books I find a good deal of discrepancy in the different descriptions of it. Manning, calls it a flat apple; Cole, flattish, round; Downing, Barry and Hooper, round; Elliott and Thomas, roundish. Hooper evidently finds discrepancies in different specimens. Either there must be a good deal of "sporting" on different soils, or else varieties hardly distinguishable.

The Early Harvest, according to Elliott, is not successful when root-grafted. My own trees are budded and bear tolerably well in alternate years. The tree is not so healthy as could be wished, and upon the whole not very productive

nor an early bearer. It has a marked peculiarity in the forks of the small branches, which make with each other "very acute angles." With me, the apple is flat, though many specimens are round and even conical.

It is remarkable as a cooking apple. It cooks well before it is large enough to be economically used; and improves until ripe. As an eating apple I do not admire it. It is of very evanescent flavor, and, in common with the other early apples, lacks what for want of a better name I will call "body." That is the result of the perfected juices ripened by summer and autumnal suns.

It perfects its fruit in a marvellously brief period of time. The present year the trees were in bloom about the 25th of April, and were gathered on the 7th of July in my orchard: thus ripening in a period of only 73 days, or not quite 2½ months.

As this is our earliest market apple, it may be of interest to some to know the time of ripening one year with another in the St. Louis region. I give herewith the time of sending to market with me for the last six years:

1857, July 15; 1858, June 26; 1859, July 2; 1860, June 28; 1861, July 12; 1862, July 8.

Its early ripening makes the Early Harvest a favorite in spite of many defects. It always commands a high price so as to make up for many deficiencies in health, productiveness and early bearing.

It is said in some of the books (Cole's for instance), that the White Juneating, a foreign variety, is an earlier apple than the Early Harvest—a fine bearer, and of tolerable quality as an eating apple. Do any of the readers of the *Valley Farmer* know anything of it?

FARMER FREEMAN.

Summer Pruning of the Vine.

MR. N. J. COLMAN: In the July number of the *Valley Farmer* I find communications to the Northern Ohio Grape and Wine Growers' Association, of Cleveland, from Mr. C. Carpenter, of Kelly's Island, Mr. R. Buchanan, from Cincinnati, and others. Permit me through the medium of your valuable journal to offer a few remarks also, on points in which I differ from the above named gentlemen. Let me remark here, that I do not claim my method as being the best; but it is only by controversy and exchange of ideas that we can arrive at the best method. I have given the methods of the gentlemen named, both a fair trial, and could not succeed, but succeeded well by the method I now follow. Will they not try mine also, only on a few vines? I have confidence that they will, and report on the success of the experiment.

I object to Mr. Kelly's method of picking out the laterals on the young canes destined to bear fruit for next season, because I hold the opinion that the leaves are the lungs of the plant. If they are, I think there should be at least one leaf left on the lateral, to draw the sap to the eye near which it starts, and I contend that this will develop the fruit bud better than pinching off, or rubbing off, the lateral altogether. For the same reason I pinch off the ends of the bearing shoots as soon as I can see where the young bunches will be, long before the grapes bloom. It is easily done then, and the growth of the young shoot being checked, will make the laterals or suckers start more vigorously opposite each of the young bunches of grapes; will make them grow vigorously, and develop evenly. I think it is much too late to stop the fruit-bearing branches, when the bloom is over and the young fruit set. You must then, by stopping the branch, deprive it of many well developed leaves; but, stop it in its incipiency, and the young laterals will push vigorously; and as I pinch the shoot just beyond the last bunch of grapes, there will soon be four or five vigorous laterals on each shoot. These I stop again, as soon as one of their leaves is developed, to one leaf, which then develops rapidly, gets very large, and shades the fruit. The young shoots which may start again I leave unchecked. The advantages derived from this plan are the following:

1. Instead of depriving the shoots of leaves, I make them push out more, at the very place where they ought to be, namely opposite the young fruit, developing it evenly and rapidly.

2. By doing this, the bunches will ripen evenly, and develop evenly instead of the last bunch ripening a week later, as it generally does if the shoots are stopped late, and three or four leaves beyond the fruit.

3. It prevents, to a great extent, the premature dropping of the leaves in fall, as the leaves on the laterals generally remain, when the first leaves have dropped.

4. They shade the fruit better.

I have also an objection to the bow system of tying, recommended in Mr. Buchanan's letter; it brings the fruit too near the ground, and also prevents the circulation of air, as the foliage comes too near together, thereby creating dampness, and tendency to mildew and rot. I would rather tie the bearing canes in a slanting position, or at most a half circle, either on trellis or stakes, so as to give them all the circulation of air I can get.

GEORGE HUSMANN.

[Written for the Valley Farmer.]

APPLE BORER.

I have been a careful reader of agricultural papers for the last few years, and have read many articles on this subject. I have used crooked wires, pellets of cotton soaked in turpentine, and the knife; but never knew for a certainty till this spring that I ever killed any borers. Either I am more dull of comprehension, or writers are not explicit enough on this subject like many others on which they write. I have learned in the dear school of experience how to destroy these pests in apple trees, with the knife. About the 20th of May, or a little later, they usually enter the bark from a ½ to 2 inches above the surface. The fresh borings and hole will indicate where. Then is the time to cut them out and destroy them, they will be about one-half inch in length. The error of many as well as my own I presume is this, we defer the work too long, and they get out of the reach of the knife.

R. W. H.

Richfield, Adams Co., Ill., July, 1862.

[Reported for the Valley Farmer.]

Meramec Horticultural Society.

ALLENTON, July 3d, 1862.

The forty-third monthly meeting was held in the house of the President. Vice-President Beale in the chair. On motion the reading of the minutes of the former meeting was dispensed with.

One new member was admitted.

The Exhibition Committee presented the following plan for the exhibition which was adopted:

That the exhibition be held on Thursday, the 11th day of September, at the School House in Allenton, and that the members of the Society, and all others feeling so disposed, present specimens and samples of their various crops and productions at the time and place above named. We further recommend the following rules for the government of the exhibition, viz:

1. All exhibitors are requested to have their articles, as far as practicable, carefully named and labeled, and delivered at the place of exhibition previous to 9 o'clock A. M. The names of the exhibitors to be attached or not at their option.

2. The President shall appoint a Superintendent for each of the following departments, to-wit: Fruits, Flowers, Vegetables, Grains, Ornamentals and Miscellaneous. Each Superintendent shall provide such assistants as he may find necessary.

3. The Exhibition to be open to the public at 10 o'clock A. M.

4. A recess from 12 to 1 o'clock to partake of a Pic-nic dinner.

5. It shall be the duty of each Superintendent to furnish the Executive Committee with a list of names of exhibitors, and the articles exhibited in his department, with such remarks in regard to peculiar merit as he may deem expedient.

6th. The Exhibition shall close at 4 o'clock P. M.

T. R. ALLEN, Ch.

The President appointed the following Superintendents:

Fruits, T. R. Allen; Flowers, Dr. Beale; Vegetables, J. S. Seymour; Grains, Dr. McPherson; Ornamentals, E. Vaughn; Miscellaneous, P. M. Brown.

It was on motion, RESOLVED, That the President examine the unbound books donated to the Society by Mr. O. Kittredge, and get the complete volumes bound for the Library, and put the others into circulation among the members.

Some samples of native wine were presented to the Society by Mr. George Husmann, of Hermann, when it was on motion, RESOLVED, That a committee of three be appointed to test the wines and report. The President appointed N. J. Colman, J. S. Seymour and Wm. Muir, said committee.

Mr. T. R. Allen called attention to several samples of wheat from seed sent by the Patent Office, and suggested that a committee be appointed to examine and report upon said samples. The President appointed Wm. Harris, A. W. McPherson and P. M. Brown, said committee.

On motion the meeting adjourned for dinner.

The afternoon session was opened by the reading of reports.

The Fruit Committee reports: P. M. Brown has a quantity of good, well-grown Morello Cherries. Dr. Beale has a similar sample. Judge Tippett sends us a good sample of Ox-Heart Cherries; a very good market cherry, but not of good quality. The Secretary shows us to-day quite a variety of Raspberries—Brinckle's Orange, Kirtland, Catawissa, English Red, Ohio Everbearing—all very good; Native Black and Native White, good; Allen and Marvel of the Four Seasons, very poor.

Dr. Beale has Brinckle and English Red, very fine.

Dr. Morse has English Red and Allen.

Wm. Harris, American White and English Red.

Dr. McPherson has English Red and Doolittle's IMPROVED Black Cap—(have not been able to recognize the IMPROVEMENT).

The Secretary has Whitesmith Gooseberries, Wellington's Glory, American Seedling, and Houghton's Seedling.

Judge Tippett sends a berry getting to be known as LABAUME'S GOOSEBERRY; a foreign variety, cultivated for many years with perfect success; free from mildew; in quality certainly BEST; size, large; semi-transparent; color, deep green, when ripe. The Whitesmith and Wellington's Glory, by Mr. Muir, are very fine specimens and are quite a novelty on our table. Mr. Muir thinks they can be grown with perfect success: has fruited them 4 years, with no mildew either on wood or fruit. Our American varieties to-day look very insignificant by the side of these fine looking foreigners.

Mr. T. R. Allen makes a large show of Houghton's Seedling and Native Wild Gooseberries, and Red Dutch Currants. The Houghton and Currants very fair berries and heavy crop.

Mr. J. S. Seymour brings the Mulberry Blackberry—a curiosity; EARLY, SWEET, flavorless.

Dr. McPherson shows Dorchester Blackberry; good, and comes a little before the Lawton.

Dr. Beale shows the Lawton, not ripe.

By Judge Tippett the Striped June apple, Red June and Early Harvest—all ripe. Striped June earliest and poorest.

Mr. Muir has Red June.

Mr. T. R. Allen has Red June and Early Harvest—not ripe.

Mr. Harris, Early Harvest, ripe.

Mr. T. R. Allen shows us again specimens of winter apples, still looking well; Newtown Pippin, Jeneton, Willow Twig, and Pryor's Red.

A. W. MCPHERSON, Ch.

The Flower Committee report, Boquets presented to the Society in the following order of merit: By Mrs. Seymour, No. 1; by Margaret Muir, No. 2; by Mr. Jas. Shields, No. 3. WM. MUIR, Ch.

The Vegetable Committee reports: Mr. E. Vaughn presents very fine specimens of White Sprout Potatoes. JAS. SHIELDS, Ch.

The Wine Committee report: The Committee to whom was referred samples of wine exhibited before the Society by George Husmann, of Hermann, respectfully report that the sample of Norton's Virginia, made by Francis Langendorfer, is a very superior article; the best the Committee has tasted; more pleasant, agreeable, and less astringent, and worthy of the highest praise; and, if it can always be made as superior as this sample, we predict it will take the highest rank among our native wines. The sample resembles Port and Burgundy, and the Committee thinks it equal or superior to those varieties, and as this wine can be had pure, without adulteration, we recommend it to take the place of those wines.

The sample of Herbemont, made by Wm. Poeschel, is also a very superior article, resembling Madeira; a very pleasant table wine, and, in the judgment of the Committee, superior to the Catawba for that purpose. The sample was obtained from a barrel made from sixty-five vines, being a yield of about one thousand gallons to the acre, in the season of 1861; when the Catawba and Isabella on the same ground were destroyed by the dropping of their leaves; the Herbemont retained them green and fresh to the end of the season.

The Catawba, by Jacob Rommel, is of excellent quality for Catawba, of the vintage of 1861, but we think inferior to the other samples.

N. J. Colman, Ch.

The Committee on Samples of Wheat presented by Mr. T. R. Allen, grown of seed presented to the Society by the Patent Office, find four samples of the same, and one sample of our Common White Wheat of the variety known as Purple Straw. No. 1, a large, smooth-headed wheat, received under the name of Noe Wheat; grain very large size, white, averaging about 40 grains to the head, well worthy of further trial, promising well. No. 2, a very large, square-headed, velvety-bearded wheat; grain very large, averaging about 65 grains to the head. The only objection to this wheat is its very heavy beard. The Committee think it very desirable to give it further trial. The name under which this wheat was received, not recollected; think it is the Poulard. The other two samples not considered worthy of further trial.

W. Harris, Ch.

The Executive Committee propose for discussion at the next meeting, "The Fruits on the Table." We will most likely have some peaches that will be well worth discussing. Adopted. The discussion of the question of the day, "The Propagation of Grapes from Layers, and the Fruits and Flowers on Exhibition," was then entered upon.

Mr. N. J. Colman being called upon to open the discussion said, that the subject of layering the grape might be divided into two parts, spring layering and summer layering. He should confine his remarks to summer layering. He would merely give the Society his practice. He first carefully prepared the ground where the vine was to be laid down, then laid the vine down on the ground, carefully extending it its full length, then cover the cane to the depth of about two inches with fine soil, being careful to leave all the leaves and laterals uncovered. As the vine continues its growth it can be again layered when there is sufficient length of wood, up to about the first of September in this latitude. There is, or should be, a lateral shoot at every eye on the vine, and each lateral becomes a plant, taking root at its connection with the vine. If the vine is sufficiently vigorous, the laterals will make quite a strong growth and can also be layered the same season. I have had some difficulty with my plants from summer layering, in keeping them over winter, owing to the wood not being sufficiently ripened, so that they sometimes rot during winter; but in favorable seasons, and with proper care in putting the plants in soil which will not hold too much moisture, no such difficulty need be apprehended. I was informed that from 200 Concord cuttings Mr. Husmann made 1400 plants last year, and would like to know how it was done.

The Secretary in answer to a question said, that in regard to summer layering, he had practiced it with the best results. He had, last year for instance, grafted 4 eyes of Bullitt wood and raised 37 roots from them. He selected an appropriate shoot, dug the ground well in the line in which the shoot was to be laid; when the shoot had attained the length desired, pinch in the tip of the shoot to develop the lateral shoots. Scoop out the earth to the depth of 2 inches, pinch off the original leaf, and cover with the earth. I find that by bending the shoot to the ground before pinching in, aids the development of the lateral shoots; think July the best month, but have had them do well at the end of August. I take up the shoots at the end of the season, cut off the roots to about 12 inches, and heel them in a piece of dry ground up to the last eye. Have tried long roots wrapped round the stem, but found them too bulky, and having a tendency to cause the fine fibres to decay.

Dr. Morse—I would like to have an opinion of the difference between plants raised from layers and cuttings. I think layers make much stronger plants. If so, plants from cuttings should be discouraged. Single eyes make good plants, but require a hot bed. I think that constant layering weakens the original plant. I have a Delaware plant that I have layered for some years in succession, and the early layers grow much better than the original plant. Would like to have Mr. Husmann's opinion upon this.

Mr. Husmann—I think these gentlemen have exhausted the subject. My plan is the same as indicated by Mr. Muir. I pinch off the ends, and lay down when the laterals make 4 or 5 leaves, and cover not more than an inch deep, and when the shoots have grown 8 or 9 inches more, I pinch off their tips, as I think this makes them root better. By covering deeper they are much more liable to damp off, and also have a tendency not to ripen their roots, which causes them to decay away during the winter, as has been mentioned. I take them up in the fall, cut them into separate plants, and puddle their roots in a puddle of clay and sand so as to give the roots a good coating, and heel them in ground where it is dry or well drained. There is much difference in summer layering in the season and variety. As to summer layering, I not only do it once, but twice and three times. Thus I layer the laterals of the layers, and sometimes layer their laterals also. It was so in the case of the Concord cuttings. I planted the cuttings, they made good growth, and I layered and re-layered them till I produced from 200 cuttings 1,400 plants. Two years since I mulched with Cottonwood saw-dust and they did well. I find an inch of earth sufficient; some will root themselves by only lying on the ground.

FRUITS ON THE TABLE—THE RASPBERRY.

Dr. Morse—I have 2 varieties on the table. The English Red Cane has fruited 3 years, and bears well with little cultivation. I think of planting it for market. The Allen does not fill out its fruit. Where it is planted along with the English Red it has made fine berries, and I think that by planting in alternate hills with the English Red, the Allen will do well. Would like to hear about the Brinckle's Orange.

N. J. Colman—I have taken much interest in the Raspberry question for market; have tried 15 to 20 varieties, and have found but one kind that will make any show. What is called here the English Red is the false Red Antwerp. We cannot do well with the Black Cap; they are brought here by the car load from Cincinnati and sold at 10 cents a quart; the Red varieties they can't bring, and so they command 40 to 50 cents a quart, and the demand greatly exceeds the supply. The Brinckle's Orange is a fine showy berry, and sells well; and where a man will take pains to cover in the winter, does well.

J. S. Seymour—The summer is as bad for the raspberry as the winter; the hot weather in August stops

their growth; they start again and make new wood in the fall, which does not ripen, and thus gets winter killed.

President Beale—I think that they will do best in dry, rich soil.

Geo. Husmann—I don't think it material whether Red or White for market. I found a Black Cap as large as this English Red; is firm, juicy, and of fine flavor.

The Secretary finds his Allen's make very fine, full berries, fertilized by the Lawton Blackberry. Thinks that to gather the raspberry a little under-ripe, with a part of the stem and calyx like the strawberry, they can be taken to market, and the Brinckle and Kirtland and some others will sell well.

BEST GRAPES.

Mr. Husmann being asked, from his long experience, what grapes he considered best, said the Norton, Herbemont and Concord were fixed facts. There are also some that promise extremely well; the Taylor, Hartford Prolific, Cynthiana, Arkansas, North Carolina, Cassiday; and some will like the Early Northern Muscadine, it is early, hardy and a good grape, where a strong flavor is relished. Blood's Black is a good, very early grape; began to color last Monday. There are two varieties of this grape, the other being 2 weeks later. These varieties were not in the least affected by the leaf blight. I omitted to name the Louisiana as a good grape. Most of the other popular varieties were affected by the leaf blight; and some I would not recommend without further experience.

The next meeting was announced to be held at the house of Mr. T. R. Allen, at Allenton, on the first Thursday of August, at 10 A. M.

On motion the meeting adjourned.

WILLIAM MUIR, Sec.

NEW ROSES.

Beauty of Waltham.—Hybrid Perpetual, a seedling from Jules Margottin, raised by the celebrated rose grower, Wm. Paul, of London. It flowered for the first time in 1860. From several beds of seedlings, this was selected as the best; the flowers are large and finely cupped; the petals of more than ordinary thickness; the color so clear and lively that the skill of the artist can hardly convey a just idea of it; the habit is vigorous, the foliage exceedingly handsome, and it is perfectly hardy. As the plant grows well and flowers freely, it is expected to rank with Jules Margottin, General Jacqueminot and others as first-class decorative plants.

Marquise de Foucault.—Tea scented, of a rich cream color, very full, sweet, and flowers as freely as Mrs. Bosanquet. It was raised from seed by Monsieur Margottin of the Bourg-la-Reine. This plant is best suited for pot culture or for placing against a wall or a pillar in a conservatory.

Souvenir de Comte Cavour.—Hybrid Perpetual. This was also raised by the same grower as the Marquise de Foucault. It is a seedling from General Jacqueminot. The flowers are reddish crimson, shaded with crimson maroon, bright and velvety, large, full and of good form; the flower stalks are stiff and erect, displaying the flowers to great advantage; the growth is vigorous, and the constitution hardy.

Catherine Guillot.—Bourbon Perpetual—is a seedling from Louise Odier, which it much resembles, although the wood and foliage are of a darker green. The flower is large and full, the petals convex, owing to which the form of the flower is unusually round and perfect, resembling in some measure that of the old Cabbage Rose; the color is a beautiful rosy purple; the flowers are very sweet, produced abundantly and in quick succession. It is a plant of the first order, and no collection should be without it.

General Washington—Hybrid Perpetual. This might be appropriately called the *Crimson Turban Rose*; it is good and constant; the depth of the flower is remarkable; the color brilliant red, large and full, and fine form.

Modele de Perfection—Bourbon—is another of the *Louise Odier* race, and too much can scarcely be said in its praise; the flowers, though not large, are exquisitely cupped, of the clearest pink and very full.

Parmentier—Hybrid Perpetual—has rose-colored flowers; the petals are beautifully arranged and slightly imbricated. This is a good hardy free blooming variety, of very compact growth.

Praire de Terre Noire—Hybrid Perpetual—a distinct and beautiful variety. Flowers purple, shaded with violet, bright in color, large, full and of good form.

Princesse Mathylde—Hybrid Perpetual—will long be a favorite in the garden; the flowers scarlet and maroon, beautifully shaded and produced in large clusters; the colors are exceedingly rich and splendid. The plant blooms freely and is very effective.—[*Co. Gent.*

A SIMPLE BUT GREAT REMEDY.—Bury dead lambs, dead pigs, and carcasses useless for meat, and bones, under your trees, and at the roots of shrubs, especially grape vines. The flesh of these carcasses is among the best of manures, and will show wonderfully in your trees, not only in the branches, but in the fruit. The bones are of still greater benefit. Rich in fertilizing matter, this matter will keep imparting itself to the soil as the bones decompose for a dozen or more years, thus forming a constant source of fertility. A dead lamb is worth its living price to a tree. Bury not too deep; but a few inches beneath the surface, and in several places under the tree. F. G.

Ringing, Summer Pruning, and the True Sap of Trees.

The Isabella Grape may be accelerated in ripening, and produce large berries by a process of ringing the shoots in June and July. Vines treated in this manner produce fruit nearly twice the usual size. When girdled an inch in width, the shoot operated upon to this extent, dies of course, the following winter; but on the contrary when the ring of the bark is taken off only one-half an inch in width, the fruit grows larger, and the bark coming together before the winter, a connection is formed, and the shoot is not thus destroyed. In explanation of this effect we would say that the crude sap of the vine, after passing up through the *Alburnum* or sap wood to the leaves, where it is concentrated, returns through the nerves of the leaves, to the base of the leaf-stalk, and then downward between the bark and young wood called *Cambium*. This is the true sap of trees; it is wholly generated in the leaves, descending to the extremities of their roots, depositing in its course the matter which is successively added to the tree. When the enlargement and more early maturity of the fruit be the object, the operation of ringing may be performed as above; but if made on the small branches of the new wood, the fruit does not acquire a proper state of maturity, it should be done on the previous year's shoots. The effects of ringing are more obvious on the grape, pear and apple, than upon some fruits; we have attempted it on the peach tree without any seeming effect. If, by the agency of leaves, the gases extracted from the atmosphere by these organs, and the juices drawn from the earth by the roots are mixed, assimilated and rendered subservient to the tree, thereby increasing its growth, and perfecting its fruit, the question arises, Is summer pruning beneficial or injurious? We apprehend that it is improper; for by the process we diminish the resources of the tree, in thus removing so many leaves, as we must of necessity, in this operation. The above, if true, shows the folly of taking off the leaves of any fruit tree, to accelerate the ripening of its fruit.

The *Alburnum* is the outer coating of young wood, often called sap-wood. The *Cambium* is mucilaginous matter found between the bark and young wood.—[*New England Farmer.*

Vermin on Gooseberries and Currants.—When once insects are settled down on your currants and gooseberries, you may as well pull up and set anew in some other place. We have not yet heard of a successful mode of exterminating the currant worm. Make a clean sweep of the old stock, root and branch. F.G.

WILSON'S ALBANY STRAWBERRY

We see that the Worcester County Horticultural Society recommend as the most desirable kinds of strawberries for family use and for market, the Hovey's Seedling, Jenney's Seedling, Jenny Lind, and Wilson's Albany.—The Committee say, they "esteem these the most popular and productive varieties under general cultivation." Edward Earle, the Chairman of the Committee, says he has raised the Wilson's Albany ever since they were introduced into Worcester. He had never had such success as with the Wilson. They want to be thoroughly ripe, however; as dark as some cherries—say the Tartarian. S. V. Stone said of it in the discussion, that if a person should take a plate of the Wilson's Albany first, and afterwards one of Hovey's he will scarcely relish the latter. Thinks that the unfavorable opinion of the Wilson, adopted by so many, is owing to their not eating it ripe. Remembering the usual color of strawberries, they pick the Wilson too early, not waiting its perfect maturity. As to its productiveness, he has 20 feet by 6, from which, last year, he picked 75 boxes. Some of the other members thought it too acid; but at the close of the discussion it was unanimously adopted.

We fear that the good people of Worcester did not have the fear of Bro. Hovey's wrath sufficiently under consideration. How dare they recommend in his own bailwick the detested Wilson! He has never failed to give this variety a kick whenever an opportunity offered or to ventilate his wrath upon those who sustain it.

We have never contended that the Wilson was one of the sweetest berries that ever grew—but we do say, that, considering its adaptation to almost every soil and climate, its enormous productiveness, its superior firmness making it desirable for shipping purposes, and its fair quality when allowed to ripen—it has no superior for general cultivation. The Hovey, Jenney's Seedling, and Jenny Lind, recommended by the Committee, succeed in the vicinity of Saint Louis poorly; the Jenny Lind doing better than either of the others. This year, more than ever before, we learned the importance of letting the Wilson remain on the vines till they were fully ripe—nearly purple. We could not pick one patch for three or four days; but when we did pick them they did not seem to be the same variety, they were so much higher flavored and so superior to those which were merely colored red—as people commonly pick them.

[Written for the Valley Farmer.]

The Mo. State Horticultural Society.

[Proceedings continued from May No.]

HUBBARDSTON NONESUCH.

Dr. L. D. Morse—I have eaten it from several orchards in this county. I don't know of a better early winter apple.

NEWTOWN PIPPIN.

N. J. Colman—I cannot vote for this variety for general cultivation. On limestone soils it does well, but upon prairie land it will not do; it may do to apply lime to the soil, but if we wish to protect fruit growers we must tell them this of this variety; on uplands generally it does much better than on bottom land.

Dr. Morse—If we find it to be the case that it will only do on limestone soils, let us note this in the list.

Dr. Edwards—It should be known that this limestone soil is the most common in Missouri. I will plant the Newtown Pippin, and if it does not do well will tell the community all the facts as to its growth.

President—It requires a strong soil. The limestone soil is not necessary but lime is necessary. Upon limestone soil it requires manure. In this county in some cases it does not do well because it is not well cultivated, generally standing in sod. I do not think it is the richness of the prairie soil, but the want of lime.

W. C. Flagg—I have had some experience with this variety. With me it does well; it is a fine bearer; it is on the highlands 9 miles from the river in Illinois, and my neighbors upon the rich, dark soil, can do nothing with it. With lime in the soil and good cultivation, we can raise this apple. I think the black soil will do, but it must be doctored.

Dr. Edwards—The soil upon which Mr. Flagg raises this apple must have lime in it for the water from the soil has always lime in it, upon digging wells. There is some other quality present or wanting in the black soils, whether lime or what, I don't know. Does it grow in the East only upon limestone soils?

President—Mr. Pell who raises so largely of this variety has a limestone soil, and uses lime. There may be lime in the water got in wells upon this black soil and yet not be in the soil itself but in the underlying strata. These black soils are almost entirely of a diluvial character, and not formed from the decomposition of limestone rock.

N. J. Colman—A large portion of this State north of the Missouri river is of this black prairie character. If we would recommend them to plant the Newtown Pippin it would be a serious injury to this people.

John A. Pettingill—I am on the edge of this black prairie soil, and raise it without difficulty. I have raised hundreds of bushels. I have trees planted in '40 that have borne a good many years; it is a slow grower, with fine limbs and handsome head. I think Mr. Flagg is rather upon the oak-opening soil.

W. C. Flagg—I think Mr. Pettingill's soil is about the same as mine, with a light cast in it—the real black soil is still further North.

Wm. Hadley—I have about 100 trees that are about 15 years old, and I don't think all their fruit will amount to one good crop; other varieties that have the same care bear well, while these have been almost an entire failure. The grafts were obtained from good bearing trees. My soil is bottom. I find that some others are the same as me. One said he would cut his trees down. I am glad to hear of the lime and will try it. They were grafted upon their own roots.

N. J. Colman—If the gentleman will apply half a bushel of lime to each tree for three years, he will find they will do well. Mr. Pell puts a peck of lime to each tree, and his is a limestone soil.

Wm. Hadley—I find there is a worm troubles them that does not trouble any other; a small striped worm, that hangs in the tree and comes down by a web. I would like to get a remedy.

Dr. Edwards—As to the success upon the rich prairie and the timber, Mr. Rannels raises good fruit and his land is the same as the prairie.

President—There is one thing I would wish to mention—the character of the sub-soil has as much to do with the fruit as the top-soil. The roots come much sooner to the sub-soil in timber lands, and this sub-soil may contain the necessary elements for the tree. The timber land is generally upon breaks in the land and has a thinner soil.

E. B. Colman—I would like to know if the mode of working upon the stock has not much to do with the bearing qualities and duration of the tree, and the character of the fruit? While some varieties grafted upon sections of the root do not bear in from ten to twenty years, the same varieties budded or grafted upon the seedling stock so as not to make roots on their own stock, bear early and have good crops.

Mr. Pettingill—I think trees grafted IN or a little ABOVE the collar, and consequently on single and entire roots make the best trees. I believe Mr. Flagg's to be done so, and they are very fine trees.

N. J. Colman—This is a much canvassed question with nurserymen. What we want is facts. An honest man will at once out with the facts, and adapt his mode of propagation to the indications of nature, irrespective of his profit or convenience. In Mr. Hadley's case it seems the graft is not upon the roots, and the difference is traceable to the question of limestone in the soil; but the indications are that it is better to graft above ground.

Mr. Kelly—There is an idea that when grafting is done upon pieces of root, you can tell by the growth which tree was grafted upon the collar; and some men keep the different pieces of the root separate. The graft may throw out surface roots, but the main roots come from the stock.

ROME BEAUTY.

Dr. Edwards wishes to know about it.

Mr. Kelly has seen it in Cincinnati—not here. It is a fair apple. Smith's Cider is as good an apple in every respect as the Rome Beauty.

SMITH'S CIDER.

N. J. Colman—I think that its name is apt to give a wrong idea of it, and lead persons to think it is only for cider. It comes early into bearing, is hardy, and a very fine apple indeed. I think it unfortunately named.

Mr. Allen—The remarks of Mr. Colman reminds me of an apple called Smith's in Virginia. It was like the Rambo here. I concur with him in regard to the name.

WILLOW TWIG.

Mr. Flagg—I have never raised it, but hear much about it; have seen it near Alton, where it is a good bearer and long keeper; in Northern and Central Illinois it is much recommended.

LIMBER TWIG.

Mr. Riehl—I have seen the trees in Boonville; they look well, have a fine shape, much like the Winesap.

Mr. Burr—It bears when others fail; have eaten it in eastern Missouri.

President—I have seen many apples called the Limber Twig; there is in every district apples that bear this name. Would like to know the Limber Twig.

Mr. Riehl—There is a little Limber Twig, and a high Limber Twig. I speak of the Limber Twig proper; it is a late winter apple.

Mr. Redfield—The other Limber Twig is a small, late fall apple, and one of the very best.

E. B. Colman—It is much like the Little Romanite, with finer core; a great, perhaps excessive bearer.

Dr. Beale—I have known it rather as a large apple in Virginia.

Mr. Flagg—It was struck out by the Central Illinois Society because it was so uncertain in its identity, and the Willow Twig filled its place.

CAMPFIELD.

President—It is a yellowish green apple, with firm flesh, thick skin; good keeper—keeps till spring; cooks well with little sugar; a vigorous grower; makes a

handsome tree. In almost every orchard I have seen, it makes the finest tree in the orchard; have seen it in this county.

Mr. Kern—I have known it in Ohio, but never met it here; it stands high there and is a great bearer.

TALMAN'S SWEET.

E. B. Colman—I like it for a fall apple; it is one of the best, but can't be called a winter apple here.

Mr. Flagg—Has not seen it here, but at our county fair. It was a fall apple, ripened about the middle of October; is a good apple and a good bearer.

President—Has known it ever since he can remember; it is there regarded as indispensable; here I think it is a fall or early winter apple; have eaten the fruit here, and find it of excellent quality. It is one of the most profitable for stock feed of any.

WAGNER.

E. B. Coleman—Know nothing about it, but from small nursery trees, 4 to 5 years old; have seen it upon the tables of our Society in Illinois; it may not prove a long keeper.

Mr. Allen—Saw it bear in the nursery at 3 years old.

NORTHERN SPY.

Dr. Edwards asked for information.

N. J. Colman—Late in coming into bearing.

President—It comes into bearing in about 15 years.

BALTIMORE RED.

E. B. Colman—Has seen it in Illinois; saw it in November.

Mr———It is called New York Pippin.

N. J. Colman—I have a letter from Dr. Warder upon it; he says the New York Pippin and the Carolina are the same.

[To be Continued.]

ROOT-GRAFTING ROSES.

I have been engaged for several weeks in grafting roses on the Manetti root; and the singular success I have met with has induced me to give you a description of my plan.

I have the roots taken up, and packed in wet sand, and set away in the greenhouse for two weeks before using them. When grafting I never take but one root from the sand at a time.

The size of the scion must be exactly that of the root. Cut the scion lengthwise with a sharp knife, making a slit about one inch long; cut a similar slit on the root; place them together, and tie with cotton thread. I then place the grafts in my propagating bed, burying them almost entirely in the sand, and only leaving one bud exposed. If the grafts are properly managed none will fail.

I have now three hundred of the finest variety of H. P. roses, that were grafted one month since. All are growing luxuriantly. Some have new wood six inches long, with bloom-buds formed. After they have become firmly united small roots will be formed around the union of the graft and scion. I cut the root entirely off at the lower point of the scion, and then put in four-inch pots. I like this process of propagating better than that from cuttings. The plants, as a general thing, grow faster, and bloom better.—[*Cor. Gardener's Monthly.*

GRAFTING MULBERRIES.—I noticed, in reply to your correspondent's inquiry in regard to the best method of propagating the Downing Mulberry, that you advised "whip-grafting."—Some years since, I recollect reading an article by Mr. Longworth, of Cincinnati, published in the *Horticulturist*, upon the propagation of many species of plants that succeed better by budding in spring than grafting, in which he stated that, out of thirty mulberry grafts set by him, *not one grew;* but buds set by him seldom if ever failed.

In accordance with his suggestion, in the spring of 1860, as soon as the bark peeled readily, I tried a single bud which made on a small stock a growth of six feet, which satisfied me that this mode was preferable to grafting, and would suggest a trial of it to your correspondent.—[*Cor. Gardener's Monthly.*

THE RASPBERRY.

The fruit of the Raspberry is produced upon suffruticose stems which spring from the ground either in the same or the previous year. In most of the kinds it is produced upon lateral shoots which are borne by the previous year's canes. This fruit shrub differs from others of its class in the stems not being persistent, but only of annual duration. They are of an herbaceous rather than a shrubby character. The object of the cultivator should be to get these annual shoots as strong as possible: and as a multiplicity of suckers are thrown up by all kinds but the true yellow Antwerp, which propagates with great shyness, they must as soon as they can be seen, be reduced to two or three shoots, which are to form the canes for next year's crop.

Care must be taken to secure them from the action of the wind by securing them to stakes, and whenever the preceding year's crop of fruit is over, the removal of the old canes will be an advantage to the young ones. Two or three canes may be tied to a stake at the distance of five feet each way. This distance may startle the amateur, but where it can be given, it is a decided advantage; and those who cannot afford so much must bend to circumstances and do with less. At the time of the winter pruning the points of the shoots may be shortened a little, and fresh stakes put to them, which completes the process for the season.

The formation of the flower-buds may be retarded, and a late crop of fruit obtained by cutting down some of the shoots to within two or three eyes of the ground. New and vigorous shoots will be produced from the eyes, which will not form their fruit till later than the others, and thus the season of this desirable fruit may be much prolonged. The Double-bearing is a valuable kind, and should have the canes of the alternate stools cut down to two or three eyes annually. They will thus give fruit almost till Christmas in mild seasons. The finest fruit is in all cases produced upon the strongest and best ripened canes. Full exposure is therefore necessary to obtain these, and single rows will on this account always be found most productive—[*Journal of Horticulture.*

Clippings from Various Authors.

The world seems cold to us. We do not consider that *we* (I, first person singular,) are a part that help compose this number, and yet we think ourselves anything but frigid. So let us deem others then, equally good as ourselves (as they are), and the fraternal feeling will show more among us. There is an unexplored field for discovery among mankind, ourselves included.

F. G.

—

MORNING.

All the broad East was laced with tender rings
Of widening light; the daybreak shone afar;
Deep in the hollow, 'twixt her fiery wings,
FLUTTERED THE MORNING STAR.

A cloud, that through the time of darkness went
With WANTON WINDS, now, HEAVY-HEARTED, came
And fell upon the sunshine, penitent,
And burning up with shame.—[ANON.

—

There was the usual long-handled ax of the primitive woods by the door, three and a half feet long, and a large shaggy dog, whose nose, report said, was full of porcupine quills. I can testify that he looked very sober. This is the usual fortune of pioneer dogs, for they have to face the brunt of the battle for their race, and act the part of Arnold Winkelried without intending it. If he should invite one of his town friends up this way, suggesting moose-meat and unlimited freedom, the latter might pertinently inquire, "What is that sticking in your nose?" When a generation or two have used up all the enemy's darts, their successors lead a comparatively easy life. We owe to our fathers analogous blessings. Many old people receive pensions for no other reason, it seems to me, but as a compensation of having lived a long time ago. —[*Thoreau.*

—

We certainly leave the handsomest paint and clapboards behind in the woods, when we strip off the bark and poison ourselves with white-lead in the towns. We get but half the spoils of the forest. For beauty, give me the trees with the fur on. * * This house was but a slight departure from the hollow tree, which the bear still inhabits—being a hollow made with trees piled up, with a coating of bark like its original. There was a large barn, part of whose boards had been sawed by a whip-saw; and the saw-pit with its great pile of dust remained before the house. Grant's barn at Caribon Lake was said to be still larger, the biggest ox-nest in the woods, fifty feet by a hundred. Think of a monster barn in that primitive forest lifting its gray back above the tree-tops! Man makes very much such a nest for his domestic animals of withered grass and fodder as the squirrels and many other wild creatures do for themselves.—[*Ibid.*

—

BLUE-BELLS.

By cottage-doors along the roads,
You show your winsome faces,
And, like the spectre lady, haunt
The lonely woodland places.

All night your eyes are closed in sleep,
But open at the dawning;
SUCH SIMPLE FAITH AS YOURS CAN SEE
GOD'S COMING IN THE MORNING.—[T. B. ALDRICH.

—

"I wish you could once hear my sister's voice," said the schoolmistress.

"If it is like yours, it must be a pleasant one," said I.

"I never thought mine was anything," said the schoolmistress.

"How should you know," said I. People never hear their own voices—any more than they see their own faces. There is not even a looking-glass for the voice. Of course, there is something audible to us when we speak; but it is not our own voice as it is known to our acquaintances. I think if an image spoke to us in our own tones, we should not know them in the least—[*Breakfast Table.*

—

Since Love within my heart made nest,
With the fond trust of brooding bird,
I find no all-embracing word
To say how deeply I am blest.

I walk beneath the naked trees,
Where wild streams shiver as they pass,
Yet in the sere and sighing grass
I hear a murmur as of bees.

As a winged ship in calmest hour,
Still moves upon the mighty sea
To some deep ocean melody,
I feel thy spirit and thy power.—[ANON.

—

A TREATISE ON HUMOR.

If a tradesman of a corpulent and respectable appearance, with habiliments somewhat ostentatious, were to slide down gently into the mud, and dedicate a pea-green coat, I am afraid we should all have the barbarity to laugh. If his hat and wig, like treacherous servants, were to desert their failing master, it certainly would not diminish our propensity to laugh; and if he were to fall into a violent passion, and abuse everybody about him, nobody could resist the incongruity of a pea-green tradesman, very respectable, sitting in the mud, and threatening all the passers-by with the effects of his wrath. Here, every incident hightens the humor of the scene; the gayety of his tunic, the general respectability of his appearance, the rills of muddy water that trickle down his cheeks, and the harmless violence of his rage. But I should like to know if any man living could have

laughed, if he had seen Sir Isaac Newton rolling in the mud.—[*Sydney Smith.*

—

A hiss is either foolish, or tremendous, or sublime. The hissing of a pancake is absurd; the first faint hiss that rises from the extremity of the pit on the evening of a new play, sinks the soul of the author within him, and makes himself curse himself and his Thalia; the hissing of a cobra di capello is sublime—it is the whisper of death!—[*Ibid.*

—

LEAVES.

They were washed by the Autumn tempest,
They were trod by hurrying feet,
And the maids came out with their besoms,
And swept them into the street,
To be crushed and lost forever,
'Neath the wheels, in the black mire lost—
The summer' precious darlings,
She nurtured at such cost.

Again has come the Spring-time,
With the crocus's golden bloom,
With the smell of the fresh-turned earth-mold,
And the violets perfume.
Oh gardener! tell me the secret
Of thy flowers so rare and sweet!—
"I have only enriched my garden
With the black mire from the street."

Never look sad—there's nothing so bad
As getting familiar with sorrow;
Treat him to-day in a cavalier way,
And he'll seek other quarters to-morrow.[ANON.

—

JUVENILE WIT.—"Can you tell me, Bill, how it is a rooster always keeps his feathers sleek and smooth?"

"No," said Bill.

"Well, he always carries his *comb* with him."

Some one has said of those who die young, that they are like the lambs which the Alpine shepherds bear in their arms to higher, greener pastures, that the flocks may follow.—ANON.

—

POOR PURSE.

Oh! had I money galore—in store,
I'd just build a cottage—no more—
In a beautiful glen, far away from rude men!
But when will that time be—AH! WHEN?
AND WHEN THE SUNRISE CAME TO OPEN MY EYES,
I'd forth with the bees and the bright butterflies,
And my children all fresh from their sleep.
We'd cull sweetest posies,
Wall-flowers and roses,
And our hearts in blest gratitude steep.
Oh they say that great wealth is a curse,
But, what's worse,
My heart is too big for my purse,
Poor purse!—[ANON.

—

There is more truth than humor in the old lady's stutter, when she called the noted Mormon leader—"Big—Big—Bigamy Young."—[ANON.

—

When prejudice enters the mind, like a snake it occupies the seat of truth. F.G.

—

ELEGY,

On "Poor Charley," who, having reached the age of dry bones (28), in attempting to kick up his heels, like a colt, broke one of his legs. Not able to commit suicide, as Plato did when he broke his finger, one of the farmers shot him:

Here lies a faithful steed—
A stanch, uncompromising "silver-gray"—
Who ran the race of life with sprightly speed,
Yet never ran—away.

Wild oats he never sowed,
Yet masticated tame ones with much zest;
Cheerfully he bore each light allotted load;
As cheerfully took rest.

Bright were his eyes, yet soft,
And in the main his tail was white and flowing;
And though he never sketched a single draught,
He showed great taste for drawing.

Lithe were his limbs and clean,
Fitted alike for buggy or for dray;
And like Napoleon the Great, I ween,
He had a martial neigh.

Oft have I watched him grace
His favorite stall, well littered, warm, and fair,
With such contentment shining from his face,
And such a stable air.

With here and there a speck
Of roan diversifying his broad back;
And, martyr-like, a halter round his neck,
Which bound him to the rack.

Mors-omnibus! at length
The hey-day of his life was damped by death;
So summoning all his late remaining strength,
He drew—his final breath.—[T. SFOON.

—

When fact enters the field of fiction, there is a scattering of interlopers—the original then assumes its prerogative:

The walls were scribbled over with the names of travelers. There were not many of them, for few have reached Sinai in these later years. But there were some scores of them here and there, and while reading them aloud to his companions, Strong paused and hesitated; and then passed to the next name and read that, and the next, and the next, and when no one noticed him went back and silently pondered on that name which he had not uttered aloud.

Certainly it were no profanation to utter on the sacred air of Sinai the name of any one earthly. Even a lover might have been pardoned for shouting the name of his beloved on that hill-side, as the Moslem pilgrims are accustomed to do at the holy Kaaba. But he was no lover; only a sad traveler—sad now—for he read the name of one who was once the light of a home in this far Western world—beautiful, radiant in her purity, but whose name has not been uttered on any lip for many years—a forbidden, would that it were a forgotten name.

It is the old, wild story of love, and sin, and shame. Was it not a startling association with the sacred mountain of the Law. She—let her be nameless here also—she was the daughter of a country clergyman in the happiest village of the State of New York. She was young, and, I have said, beautiful. Her form was magnificent; her lip was maddening; her eye was a

glory. Educated by her father in the parsonage, she was as thoroughly accomplished in the lore he could teach her as the old man himself; and I who write these lines can bear testimony that she could read the words of the Law in the language of Moses himself, and the words of the Gospel in the tongue Paul used on Mars' Hill: for I have heard her do both.

A city aunt did the rest. She could sing by nature, and she had masters who taught her the use of harp and guitar, while in the gay assemblies of the Western metropolis she rapidly acquired those arts and that knowledge which the world values more than Greek or Hebrew.

I am dwelling too long on this episode. The spring sunshine casts the evening shadow of the old church spire on the grave of the pastor, whose head lies low under the grass. No one was near him when he died. Around him, in the sad twilight, came visions of golden years, and the form of his lost child flitted hither and thither in the room as he closed his weary eyes.

They found him dead in his chair, with the early morning sunshine silvering the hair grown white with the grief and shame of her fall. She had fled with one who could not call her wife. They wandered over the world. My friend saw her name at Sinai; I saw it at Wady Halfeh, at Baalbec, on a column of the Parthenon; and I saw it last on a white stone in a little graveyard under the shadow of the Jungfrau, where the moon shines sadly on the grass that covers her before it goes westward to hallow the night above her father's grave in the up-country church-yard.—[*An American at Sinai.*

—

There is variety of style in literature. The following has spice and color:

Oft in the sunny mornings have I seen
Bright yellow birds of a rich lemon hue,
Meeting in crowds upon the branches green,
And sweetly singing all the morning through.
And others, with their heads grayish and dark,
Pressing their cinnamon cheeks to the old trees,
And striking on the hard, rough, shriveled bark,
Like conscience on a bosom ill at ease.
—[Mac Carthy.

Over the which, a critic, waxing wroth, perpetrates the following:

My grand-aunt had an aviary in Dalkey,
In a back yard behind her mansion set;
There the white cockatoo went talkey, talkey,
To the bright-green and orange parroquet;
And pert cock-robins, with breasts red as bricks,
And other warblers yellow as a custard,
Came and sang songs upon a pile of sticks,
To birds all streaked with feathery lines of mustard.

—

The goal of yesterday is the starting point of to-day.—[*Carlyle.*

I am indebted to you five dollars: Shortened —I O U A V.

We find our lost Eden of youth in the children about us.

"Come to me thou heavy-laden, and I will give thee rest," as the Alaween robber said to the traveling merchant. F. G.

And then she was silent a little space—and then—and then—

What was it then, oh, doubtful, faithless man! who neither in thought nor in the flesh hast followed the footsteps of the Lord—what then?

Think you it was all a dream, a fancy, a phantasy, that as we stood there silent, breathless around her couch—father, mother, friends and servants—we heard a voice from heaven saying, "Blessed are they that mourn, for they shall be comforted?" and yet another voice, "Blessed are the dead that die in the Lord?"

She lies in the tent yonder, a statue of exceeding beauty. To-morrow we will bury her. The people of the town of Tiberias—Jews, Christians, and Turks—have been very kind, and have offered all the attentions their poverty enables them to. An hour ago the Jewish Rabbi-in-chief was here to proffer a burial place among the dead of his kindred; and the Greek priest, an ignorant, but apparently a worthy man, came after him to say that his people would not object that this our beautiful clay should lie among dust that rested in their faith. But we have chosen a spot on the hill-side above the sea, where she can lie and molder to the dust, for she expressly forbade her parents to move her from holy soil; and here in the resurrection, among the dead of ancient days, who heard not the voice of the Master when he spoke in earthly tones, reproaching with her holy face the men of Bethsaida and Capernaum, our child will stand up an angel.

I close my letter in the saddest yet the holiest evening that can be imagined. Our Bedouins are as sorrowful as we. Every man of them would have died for Alice Warren.—[*Travel Notes in Bible Lands.*

Use of Sweet Apples.—A sweet apple, sound and fair, has a deal of sugar or saccharine in its composition. It is, therefore, nutritious; for sweet apples, raw, will fat cattle, horses, pigs, sheep and poultry. Cooked sweet apples will "fat" children, and make grown people fleshy—"fat" not being a polite word as applied to grown persons. Children being more of the animal than "grown folks," we are not so fastidious in their classification. But to the matter in question. In every good farmer's house who has an orchard, baked sweet apples are an "institution" in their season. Everybody, from the toddling baby holding up by its father's knee—children are decidedly a household commodity—away back to "our reverend grandmother" in her rocking chair, loves them. No sweetmeat smothered in sugar is half so good; no aroma of dissolved confectionery is half so simple as the soft, pulpy flesh of a well baked apple of the right kind. It is good in milk, with bread. It is good on your plate with breakfast, dinner or supper—we don't "take tea" at our house. It is good every way—"vehemently good"—as an enthusiastic friend of ours once said of tomatoes.—[*N. Y. World.*

He that would live at peace and at ease must not speak all he knows, nor judge all he sees.

Domestic Department.

[Written for the Valley Farmer.]

How to Make Vinegar.—Vinegar is made from sweetened water. That tells the secret. The saccharine principle turns to acid, and we have vinegar. Sweet cider needs but be put in a warm place—in the sun in summer—with a thin cloth over the bung hole, to make it the best of vinegar. The mother will soon form a scum on the top, which must be left in. Sour cider needs sweetening when set away for fermentation. That starts it on its way. It is difficult to get vinegar from sour cider alone. Here in the West where cider is scarce, sweetened water (it matters not how much or how little sweetened) is the thing. The water must be soft. Rain water is used. A barrel half filled will sour quicker than when full, so said: we have never tested it. Take out the bung. Stretch over the bung-hole a fine sieve or cloth, to keep out the flies. When vinegar is formed, cork it up tight, for exposure to the air hurts it. F. G.

Cure for Deafness.—Sulphuric ether poured into the ear in daily doses of four to eight drops, has recently been declared by the medical faculty of Paris, a certain cure for deafness. Applications may be continued a long time, if necessary. The cure has not failed in any of the numerous cases in which it has been applied.

For a Cut.—Wash off the blood with cold water, and bind it up with a clean cotton bandage; if it inclines to bleed, put on scraped lint, after bringing the edges of the wound together as closely as possible, and bind it rather tight; sticking plaster is also a very good remedy.

It is said that the application of warm lye to a wounded part, will prevent lockjaw. If a foot or hand, it should be immersed in it; if another part of the body, it should be bathed with flannels wrung from out the warm lye

To Stop Bleeding.—A correspondent of the "American Agriculturist," writes that bleeding from a wound on man or beast may be stopped by a mixture of wheat flour and common salt in two parts bound on with a cloth. If the bleeding be profuse, use a large quantity, say from one to three pints. It may be left on for hours, or even days, if necessary.

Muffins.—Mix a quart of wheat flour, with a pint and a half of milk, half a tea-cup of yeast, a couple of beaten eggs, a teaspoonful of salt, and a couple of tablespoonsful of lukewarm melted butter. Set the batter in a warm place to rise. When light, butter your muffin cups, turn in the mixture and bake muffins to a light brown.

Receipt for Apple Dumplings.—After making up your bread the second time, take off a sufficient quantity for dumplings, and set it away until about an hour before dinner, then make them up in rolls as you would biscuit; sprinkle a little flour over your pie-board, and put them on it far enough to allow for raising. Have ready a boiler with sufficient boiling water to steam them, place the steamer over it and put in some of the dumplings, so as not to touch each other, (see that the lid is placed on tightly,) and let them remain ten minutes; then remove them and put in others. Send them to table hot, to be eaten with cream and sugar, or butter and molasses.

Mush Biscuit.—Make about a quart of Indian meal mush or stirabout; while hot, add a piece of butter about the size of an egg; thin it with milk adding a little salt; then add some flour, thin it with a teacup of yeast, then add as much more flour as will make it the consistence of dough; knead it well, set it to rise, and bake with a hot fire. The meal makes the bread light, and thus removes the objection to the unhealthfulness of hot bread.

My Pudding.—In making this pudding, you may substitute for the butter, one-half pound of beef suet, mince as fine as possible. It will be found best to prepare the ingredients the day before. Cover closely. Grate a stale six-cent loaf of bread, boil a quart of milk and turn boiling hot over the grated bread; cover and let steep an hour. In the meantime prepare one-half pound of currants, picked, soaked and dried, half pound of raisins, quarter pound of citron cut in large slips, 2 nutmegs, 1 tablespoonful mace and cinnamon. Crush a half pound of loaf sugar, half pound butter. When the bread is uncovered, mix with it the butter, sugar, spice and citron—adding a glass of white wine. Beat 8 eggs very light, and when the milk is quite cold, stir them gradually into the mixture. Then add by degrees the raisins and currants, which must previously be dredged with flour; stir the whole very hard; put it into a buttered dish. Bake 2 hours; send to the table warm. Eat with wine sauce, or wine and sugar.

Baked Indian Pudding.—If you want to make a two-quart basinful of pudding, make with milk and sifted meal, a pint of tolerably thick mush. Let it boil till thoroughly scalded, and set it away to cool; when cool add two well beaten eggs, a small cup of sugar, a tablespoonful of ginger, half teaspoonful cinnamon, a little salt. Fill up your basin with cold milk, and with your hand mix well; set it into the oven, and when well crusted over, stir the crust in, adding a few raisins, a piece of butter half the size of an egg. Send it to the table with a dressing of butter and sugar, flavored with nutmeg.

Taylor Pudding.—One cup of molasses, half cup chopped raisins, 1 cup of suet, 1 cup of sour milk, omit cream tartar, 2 eggs, teaspoonful of soda, (two teaspoonsful cream tartar,) spice and salt to taste, flour to make thick batter, steam 3 or 4 hours.—(Cream of tartar omitted when sour milk is used.)

Bread and Butter Pudding.—Butter a dish well; then lay in a few slices of bread and butter.—Boil 1 pint of milk, pour it over 2 eggs well beaten, and then on the bread and butter. Bake in a hot oven half an hour; currants or raisins may be added.

Harrison Pudding.—Four cups flour, two-thirds cup melted butter, 1 cup molasses, 1 cup raisins, 1 cup milk, 1 teaspoonful soda. Boil in a bag or tin dish 3 hours.

Foam Sauce for the Pudding.—One teacup sugar, two-thirds cup butter, 1 tablespoonful flour, beaten together until smooth. Then place over the fire, and stir in rapidly three gills boiling water; season with nutmeg; soda about the size of a pea.

Cottage Pudding.—Three cups flour, 1 cup sugar, 1 cup milk, 2 tablespoonsful butter, 2 teaspoonsful cream tartar, 1 egg; beat all together, then add 1 teaspoonful soda; flavor with lemon. Bake one-half hour; serve with sauce.

Sauce.—One cup butter, 2 cups powdered sugar beaten to a cream, two tablespoonsful wine, half spoonful vanilla beaten with it, half pint boiling water.

Puff Pudding.—One pint milk, 3 eggs, 6 spoonfuls of flour, a little salt. Beat the yolks, then add the milk and flour; pour in a buttered dish, then add the beaten whites, but don't stir in thoroughly—1½ hours.

A Quick Made Pudding.—One pound flour, 1 pound suet, 4 eggs, one-fourth pint new milk, little mace and nutmeg, half pound raisins, quarter pound currants; mix well, and boil three-quarters of an hour.

Corn Starch Pudding.—One pint of milk, 2 eggs, 2 tablespoonsful corn starch, 4 teaspoonsful sugar in pudding, and same in whites.

Editor's Table.

Trial Subscribers at Half Price.

In order that the public may become better acquainted with the merits of the "Valley Farmer," we have determined to make the following liberal offer. We will send all the numbers for the present year (1862) at half price—only fifty cents. Our present subscribers will confer a favor by making known to their neighbors and friends these very liberal terms. We are satisfied that those who read the "Farmer" one year will never consent to be without it hereafter—hence our proposition.

American Pomological Society.

In conformity with a resolution adopted at the last meeting of this National Association, the undersigned, President thereof, gives notice that its Ninth Session will commence in the Hall of the Massachusetts Horticultural Society, corner of Washington and West streets, Boston, Massachusetts, on Wednesday, September 17th, 1862, at 12 o'clock, noon, and will continue for several days. All Horticultural, Pomological, Agricultural, and other kindred institutions in the United States and the British Provinces, are invited to send delegations as large as they may deem expedient, and all other persons interested in the cultivation of fruits are invited to be present and to take seats in the Convention.

The present season promises to be the most propitious for fruit that has occurred for many years, and it is anticipated that the coming session, which takes place at the same time with the Annual Exhibition of the Massachusetts Horticultural Society, may be made one of the most interesting which has ever been held by the Society. All the States and Territories are urgently invited to be present, by delegation, at this meeting, that the amicable and social relations which have heretofore existed between the members of the Society may be fostered and perpetuated, and the result of its deliberations, so beneficial to the country at large, be generally and widely diffused.

Among the prominent subjects to be submitted at this session will be the Report of the Special Committee appointed to revise the Society's Catalogue of Fruits, and thus to ascertain what varieties are adapted to the different sections and districts of our country. The various State and Local Committees who have not already made their Reports on the Revision are therefore solicited to forward them, without further delay, to P. Barry, Esq., Rochester, N. Y., Chairman of said Committee. And it is further requested that all other Reports, which are by the By-laws made returnable to the General Chairman of the Fruit Committee, now deceased, may also be addressed to Mr. Barry, as aforesaid.

Members and delegates are requested to contribute specimens of the fruits best adapted to their respective districts—to furnish descriptions of the same, their mode of cultivation, and to communicate whatever may aid in promoting the objects of the Society and the science of American Pomology.

Each contributor is requested to come prepared with a complete list of his collection, and to present the same with his fruits, that a report of all the varieties entered may be submitted to the meeting as soon as practicable.

All persons desirous of becoming members can remit the admission fee to Thomas P. James, Esq., Treasurer, Philadelphia, or the President, at Boston, who will furnish them with the Transactions of the Society. Life membership, ten dollars; biennial, two dollars.

Packages of fruits may be addressed as follows, "American Pomological Society, care of Mass. Hort. Society, Boston, Massachusetts."

MARSHALL P. WILDER, President.
THOMAS W. FIELD, Secretary.

SORGHUM SYRUP.—Several months ago a bottle of the above syrup was left at our office (during our absence) by the maker, Mr. A. Gyol, of Shipman, Ills. Although it has been standing in a warm room during the intervening time it is still in fine order and of excellent quality—better than the molasses to be got at the stores. There has been a large crop of Sorghum planted this season, and the yield will be immense. The season hereabouts has been favorable to the growth of the cane.

ILLINOIS STATE FAIR.—The next annual Fair of the Illinois State Agricultural Society is to be held at Peoria, opening on the last Monday of September and continuing six days. It is to be hoped that certain unfortunate circumstances, which last year conspired to render our State Fair the next thing to a failure, will not be again encountered. The location for the next exhibition has been well chosen. Peoria is a central point, accessible from all parts of the State, by railroad or river, and possessed of a population who will do all in their power to provide ample and comfortable quarters for the numerous throng that will be among them during fair week. The grounds selected for the exhibition are those used for several years past by the Peoria Agricultural Society, and are on the "bluff"—as the Peorians call it—a convenient distance from the business portion of the city, and commanding a splendid view of the river and surrounding scenery. An abundant supply of good water is near, and the grounds are, for the most part, finely shaded with forest trees—two very essential considerations in the location of a State Fair. The grounds are now and will be under the immediate supervision of Col. Capron, well known to the agriculturists of Illinois. We hope this next industrial exhibition will amply atone for the deficiencies of that held near this city last September, and to this end our farmers and mechanics should prepare for an extensive and creditable display of their valuable products.—["Chi. Post."

HORSE SHOEING.—We have had occasion to visit the shoeing establishment of Mr. Busby, located on Green, between Second and Third Streets, and from what we there saw and heard, are satisfied that Mr. B. fully understands his business, and may be considered one of the best workmen in this vicinity. He employs the very best of help, and gives his personal attention to all the details of his business.

If any of our readers happen to have a horse with faulty feet, we advise them to send the same to Mr. Busby.

FAIR OF THE MADISON COUNTY, ILLS., AGR'L. SOCIETY.—The next Fair of this Society will be held at Edwardsville, on the 7th, 8th, 9th and 10th of October

The Board of Directors is composed of the following gentlemen: T. J. Barnsback, W. C. Flagg, D. B. Gillham, Wm. Hadley, Wm. B. Hundley, John Weaver, J. A. Prickett. Wm. B. Hundley, Esq. is President, and John A. Prickett, Corresponding Secretary.

N. J. COLMAN, ESQ.—Sir: Will you be kind enough to enclose me the address of some person whom I can purchase some pure blooded Southdown sheep from?

Respectfully, P. H. MELLON.

Claysville, Mo. June 27th, 1862.

[Those having them to sell will please address Mr. Mellon.]—Ed. V. F.

Cook's Sugar Evaporator, the advertisement of which will be found in our columns, recommends itself particularly to those engaged in raising the Chinese Sugar Cane. For several years it has given entire satisfaction to those who have used it. Three years ago samples of good sugar made by this Evaporator, were sent to us. It is better to purchase a well-tried Evaporator than one whose merits have not been sufficiently tested. Now is the time to make your orders, if you intend to manufacture Sugar and Syrup the coming fall.

Godey's Lady's Book—published by that veteran caterer to the tastes of the fair sex, L. A. Godey, Philadelphia—is on our table, for August, and is one of the choicest numbers yet issued. War seems only to give Mr. Godey additional energy in issuing his peerless magazine. Terms—$3 per year, single subscribers; two copies, $5; three copies, $6.

The Continental Monthly, published by J. R. Gilmore, 532 Broadway, New York, is on our table for August. It is devoted to Literature and National Policy. It is superior in literary merit to any of our mammoth monthlies, and deserves an extended patronage. Terms—$3 per year; two copies, $5; three copies, $6.

Let every farmer seriously consider that unless a portion of his farm is consecrated to horticulture, it is comparatively destitute of those things which beautify and gladden his home—and replenish his pocket.

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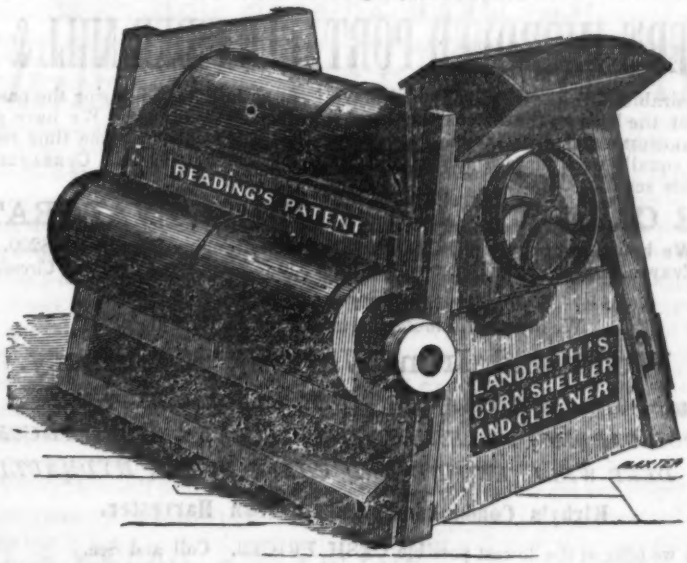

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